PIONEER®
The Art of Entertainment

Service Manual

ORDER NO.
RRV1626

STEREO FILE-TYPE CD CASSETTE DECK RECEIVER

XR-P560F

- **Refer to the service manual RRV1515 for XR-P260F /KUXJ.**

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model	Power Requirement	Remarks
	XR-P560F		
MYIXK	○	AC220-230V	
MYXK/EA	○	AC220-230V	
MYXK/EB	○	AC220-230V	
NVXK	○	AC230V	

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1. SAFETY INFORMATION

VARO!
AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.

ADVERSEL
USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION UNDGÅ UDSAETTELSE FOR STRÅLING.

VARNING!
OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRAKTA EJ STRÅLEN.

LASER
Kuva 1
Lasersateilyn varoitusmerkki

WARNING!
DEVICE INCLUDES LASER DIODE WHICH EMITS INVISIBLE INFRARED RADIATION WHICH IS DANGEROUS TO EYES. THERE IS A WARNING SIGN ACCORDING TO PICTURE 1 INSIDE THE DEVICE CLOSE TO THE LASER DIODE.

IMPORTANT
THIS PIONEER APPARATUS CONTAINS LASER OF CLASS 1.
SERVICING OPERATION OF THE APPARATUS SHOULD BE DONE BY A SPECIALLY INSTRUCTED PERSON.

LASER DIODE CHARACTERISTICS
MAXIMUM OUTPUT POWER: 5 mw
WAVELENGTH: 780-785 nm

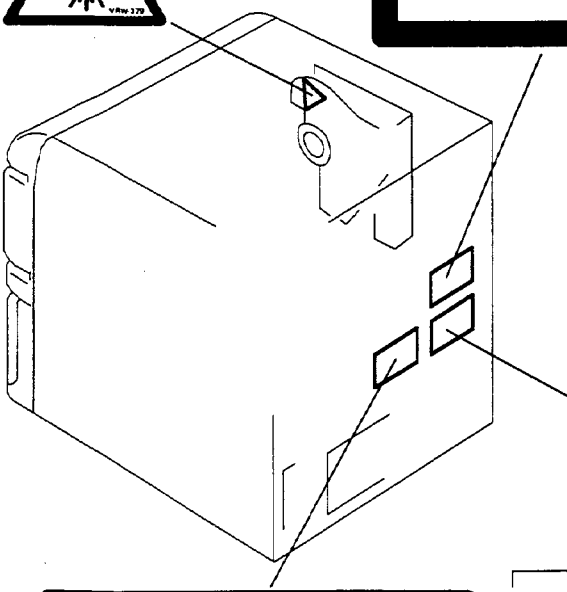
LASER
Picture 1
Warning sign for laser radiation

LABEL CHECK

All types

All types

CLASS 1
LASER PRODUCT
ARW1046



Additional Laser Caution

1. Laser Interlock Mechanism
   The position of the switch (S651) for detecting loading state is detected by the system microprocessor, and the design prevents laser diode oscillation when the swich (S651) is not on $\overline{\text{CLMP}}$ terminal side ($\overline{\text{CLMP}}$ signal is OFF or high level.). Thus, the interlock will no longer function if the switch (S651) is deliberately set to $\overline{\text{CLMP}}$ terminal side (low level).
   The interlock also does not function in the test mode *.
   Laser diode oscillation will continue, if pin 1 of M51593FP (IC101) on the PRE AMP BOARD ASSY mounted on the pickup assy is connected to GND, or pin 19 is connected to low level (ON), or else the terminals of Q101 are shorted to each other (fault condition).

2. When the cover is opened, close viewing of the objective lens with the naked eye will cause exposure to a Class 1 laser beam.

* Refer to page 55 in the service manual RRV1515.

ADVARSEL
USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSÆTTELSE FOR STRÅLING.

VORSICHT!
UNSICHTBARE LASER-STRAHLUNG TRITT AUS, WENN DECKEL (ODER KLAPPE) GEÖFFNET IST! NICHT DEM STRAHL AUSSETZEN!

VARO!
Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen.

VARNING!
Osynlig laserstrålning när denna del är öppnad och spärren är urkopplad. Betrakta ej strålen.

ARW1047

MYXK/EA and MYXK/EB types

ADVARSEL
USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSÆTTELSE FOR STRÅLING.

VORSICHT!
UNSICHTBARE LASER-STRAHLUNG TRITT AUS, WENN DECKEL (ODER KLAPPE) GEÖFFNET IST! NICHT DEM STRAHL AUSSETZEN!

ARW1049

MYIXK type

CAUTION
INVISIBLE LASER RADIATION
WHEN OPEN, AVOID
EXPOSURE TO BEAM
ARW1050

NVXK type

2. CONTRAST OF MISCELLANEOUS PARTS

NOTES:

- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex.1 When there are 2 effective digits(any digit apart from 0), such as 560 ohm and 47k ohm(tolerance is shown by J=5%, and K=10%).

560 Ω → 56 × 10¹ → 561 ····· RD1/4PU 5 6 1 J
47k Ω → 47 × 10³ → 473 ····· RD1/4PU 4 7 3 J
0.5 Ω → 0R5 ····· RN2H 0 R 5 K
1 Ω → 1R0 ····· RS1P 1 R 0 K

Ex.2 When there are 3 effective digits(such as in high precision metal film resistors).

5.62k Ω → 562 × 10¹ → 5621 ····· RN1/4PC 5 6 2 1 F

■ CONTRAST OF XR-P560F/MYIXK, MYXK/EA, MYXK/EB, NVXK AND XR-P260F/KUXJ

XR-P560F/MYIXK, MYXK/EA, MYXK/EB, NVXK and XR-P260F/KUXJ have the same construction except for the following :

Mark	Symbol & Description	Part No.					Remarks
		XR-P260F /KUXJ	XR-P560F /MYIXK	XR-P560F /MYXK/EA	XR-P560F /MYXK/EB	XR-P560F /NVXK	
	FM/AM TUNER MODULE	AXQ3112	AXQ3214	AXQ3214	AXQ3214	AXQ3214	
NSP	MAIN Asyy	AWM7203	AWM7204	AWM7204	AWM7204	AWM7204	
	├ AF Assy	AWZ8232	AWZ8233	AWZ8233	AWZ8233	AWZ8233	
	├ AMP Assy	AWZ8239	AWZ8240	AWZ8240	AWZ8240	AWZ8240	
	├ REG Assy	AWZ8246	AWZ8293	AWZ8293	AWZ8293	AWZ8293	
NSP	├ PRIMARY Assy	AWZ8248	AWZ8249	AWZ8249	AWZ8249	AWZ8249	
NSP	├ SECONDARY Assy	AWZ8255	AWZ8256	AWZ8256	AWZ8256	AWZ8256	
NSP	└ RELAY Assy	AWZ8262	AWZ8294	AWZ8294	AWZ8294	AWZ8294	
NSP	COMP Assy	AWM7210	AWM7211	AWM7211	AWM7211	AWM7211	
	├ GM-CD Assy	AWZ8263	AWZ8264	AWZ8264	AWZ8264	AWZ8264	
	├ VR Assy	AWZ8270	AWZ8271	AWZ8271	AWZ8271	AWZ8271	
	├ CONTROL Assy	AWZ8277	AWZ8278	AWZ8278	AWZ8278	AWZ8278	
	├ DISPLAY Assy	AWZ8284	AWZ8285	AWZ8285	AWZ8285	AWZ8285	
NSP	├ HOME SW Assy	AWZ8288	AWZ8295	AWZ8295	AWZ8295	AWZ8295	
NSP	└ HOOD SW Assy	AWZ8290	AWZ8296	AWZ8296	AWZ8296	AWZ8296	
	Volume Knob	AAB7069	AAB7046	AAB7046	AAB7046	AAB7046	
	Mic Volume Knob	AAB7070	AAB7068	AAB7068	AAB7068	AAB7068	
	Door Window L	AAK7211	AAK7197	AAK7197	AAK7197	AAK7197	
	Door Window R	AAK7267	AAK7268	AAK7268	AAK7268	AAK7268	
	Door Panel L	AAN7128	AAN7122	AAN7122	AAN7122	AAN7122	
	Door Panel R	AAN7129	AAN7123	AAN7123	AAN7123	AAN7123	
	Door M	AAN7115	AAN7124	AAN7124	AAN7124	AAN7124	
	Earth Screw	Not used	ABA1047	ABA1047	ABA1047	ABA1047	No. 1
	Washer (Between HOME SW Assy and Rack Base)	ABF7002	ABE-053	ABE-053	ABE-053	ABE-053	
	Door Spring L	ABH7084	ABH7093	ABH7093	ABH7093	ABH7093	
	Door Spring R	ABH7085	ABH7094	ABH7094	ABH7094	ABH7094	
	Door M Spring	ABH7090	ABH7096	ABH7096	ABH7096	ABH7096	
	Eject Spring (L)	ABH7102	ABH7028	ABH7028	ABH7028	ABH7028	
	Eject Spring (R)	ABH7103	ABH7029	ABH7029	ABH7029	ABH7029	

Note : The numbers in the remarks column corresspond to the numbers on the exploded diagram. Refer to "EXPLODED VIEWS".

XR-P560F

Mark	Symbol & Description	Part No.					Remarks
		XR-P260F /KUXJ	XR-P560F /MYIXK	XR-P560F /MYXK/EA	XR-P560F /MYXK/EB	XR-P560F /NVXK	
⚠	AC Power Cord	PDG1057	ADG1138	ADG1138	ADG1138	ADG1148	
⚠	Fuse (T5A) (With in AC Plug)	Not used	Not used	Not used	Not used	AEK1046	
NSP	LSR Support	AEC7055	VEC1596	VEC1596	VEC1596	VEC1596	
NSP	Spacer	AEC7056	PNW2488	PNW2488	PNW2488	PNW2488	
⚠	Fuse (FU101:T1.25A)	Not used	AEK1055	AEK1055	AEK1055	AEK1055	
⚠	Fuse (FU101:4A)	REK1082	Not used	Not used	Not used	Not used	
	Front Panel	AMB7319	AMB7320	AMB7320	AMB7320	AMB7320	
	Eject Arm (L)	AMR7074	AMR7024	AMR7024	AMR7024	AMR7024	
	Eject Arm (R)	AMR7075	AMR7025	AMR7025	AMR7025	AMR7025	
	Blind Mold L	AMR7100	AMR7092	AMR7092	AMR7092	AMR7092	
	Blind Mold R	AMR7101	AMR7093	AMR7093	AMR7093	AMR7093	
NSP	Chassis	ANA7034	ANA7030	ANA7030	ANA7030	ANA7030	
	Sub Chassis	ANA7038	ANA7037	ANA7037	ANA7037	ANA7037	
	Rear Panel	ANC7305	ANC7401	ANC7312	ANC7312	ANC7398	
	Front Stay	AND7009	AND7014	AND7014	AND7014	AND7014	
	Rear Stay	AND7010	AND7015	AND7015	AND7015	AND7015	
	Home Lock Stay	AND7012	AND7016	AND7016	AND7016	AND7016	
	Bonnet	ANE7093	ANE7096	ANE7096	ANE7096	ANE7096	
	GND Holder	ANG7072	ANG7080	ANG7080	ANG7080	ANG7080	
	Link M	ANG7076	ANG7081	ANG7081	ANG7081	ANG7081	
	Heat Sink	ANH7033	ANH7027	ANH7027	ANH7027	ANH7027	
⚠	Power Transformer (T1) (AC120V)	ATS7099	Not used	Not used	Not used	Not used	
⚠	Power Transformer (T1) (AC220-230V)	Not used	ATS7098	ATS7098	ATS7098	ATS7098	
⚠	Strain Relief	CM-22C	CM-22B	CM-22B	CM-22B	CM-22B	
	Connector Assy 5P	RKP1682	ADX7045	ADX7045	ADX7045	ADX7045	
	Connector Assy 3P	RKP1683	ADX7046	ADX7046	ADX7046	ADX7046	
	C1 Ceramic Capacitor	Not used	CKDYB102K50	CKDYB102K50	CKDYB102K50	CKDYB102K50	No. 2
	Label	ARW7016	ARW7012	ARW7012	ARW7012	ARW7012	
NSP	Caution Label (F)	Not used	ARW1046	ARW1046	ARW1046	ARW1046	No. 3
NSP	Caution Label	Not used	ARW1049	Not used	Not used	ARW1050	No. 4
NSP	Caution Label	Not used	Not used	ARW1047	ARW1047	Not used	No. 5
	65 Label	ORW1069	Not used	Not used	Not used	Not used	
	Caution Label (G)	Not used	VRW-329	VRW-329	VRW-329	VRW-329	No. 6
	FM Antenna	ADH1017	ADH1019	ADH1019	ADH1019	ADH1019	
	Loop Antenna	ATB7004	ATB7002	ATB7002	ATB7002	ATB7002	
	Front Pad LR	AHA7098	AHA7102	AHA7102	AHA7102	AHA7102	
	Rear Pad LR	AHA7099	AHA7103	AHA7103	AHA7103	AHA7103	
	Packing Case	AHD7233	AHD7238	AHD7238	AHD7238	AHD7238	
	Packing Sheet	AHG7003	AHG7001	AHG7001	AHG7001	AHG7001	
NSP	Polyethylene Bag	AHG7030	AHG1091	AHG1091	AHG1091	AHG1091	
	CD Case Rack	AMR7072	AMR7086	AMR7086	AMR7086	AMR7086	
	Operating Instructions (English)	ARB7056	Not used	Not used	ARB7057	ARB7057	
	Operating Instructions (German/Italian)	Not used	ARC7088	ARC7088	Not used	Not used	
	Operating Instructions (French/Dutch)	Not used	Not used	ARC7087	Not used	Not used	
	Operating Instructions (French/Swedish/Spanish/Portuguese)	Not used	Not used	Not used	ARC7126	Not used	

Note : The numbers in the remarks column corresspond to the numbers on the exploded diagram.
Refer to "EXPLODED VIEWS".

AF ASSY

AWZ8233 and AWZ8232 have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ8232	AWZ8233	
	L3201	Not used	LAU221J	*
	C1006 (0.01 μ F/150V)	ACG1005	Not used	
	C2001,C2002	Not used	CCSQCH101J50	*
	C2044,C2045,C2107,C2108	Not used	CKSQYB102K50	*
	C2105,C2106,C2109-C2112,C3201	Not used	CKSQYF104Z50	*
	C3012-C3015	Not used	CCSQCH150J50	*
	C3017,C3018	CKSQYF104Z50	Not used	
	C4109, C4110, C4211, C4212	Not used	CCSQCH470J50	*
	R2015	RS1/10S153J	RS1/10S752J	
	R2019	RS1/10S331J	RS1/10S132J	
	R2107,R2108	Not used	RD1/4PM100J	*
	R3046	RS1/10S000J	Not used	
	CN10 SPEAKER TERMINAL 4-P	AKE7023	AKE7024	
	J3001 BOARD-IN WIRE	DB020ND0	Not used	
	J3002 BOARD-IN WIRE	DB925ND0	Not used	

Note * : Refer to SCH-2F and SCH-3F.

AMP ASSY

AWZ8240 and AWZ8239 have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ8239	AWZ8240	
	C305,C306	Not used	CCSQCH101J50	*

Note * : Refer to SCH-5F.

REG ASSY

Although AWZ8246 and AWZ8293 are different in part number, they consist of the same components.

PRIMARY ASSY

AWZ8249 and AWZ8248 have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ8248	AWZ8249	
⚠	L101	Not used	ATF-151	*
⚠	C101,C102 (0.01 μ F/250V)	Not used	ACG7005	*
⚠	R101 (2.2M Ω , 1/2W)	ACN-208	Not used	

Note * : Refer to SCH-3F.

SECONDARY ASSY

Although AWZ8255 and AWZ8256 are different in part number, they consist of the same components.

RELAY ASSY

Although AWZ8262 and AWZ8294 are different in part number, they consist of the same components.

GM-CD ASSY

AWZ8264 and AWZ8263 have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ8263	AWZ8264	
	VR8151,VR8152	RCP1103	VRTP6HS223	

VR ASSY

Although AWZ8270 and AWZ8271 are different in part number, they consist of the same components.

CONTROL ASSY

AWZ8278 and AWZ8277 have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ8277	AWZ8278	
	D501	1SS254	Not used	
	D502	Not used	1SS254	*
	L591	Not used	LAU180J	*
	C515,C522	Not used	CKSQYB472K50	*
	C516,C517,C591,C592	Not used	CCSQCH101J50	*
	C595,C596	Not used	CKSQYB102K50	*

Note * : Refer to SCH-4F.

DISPLAY ASSY

Although AWZ8284 and AWZ8285 are different in part number, they consist of the same components.

HOME SW ASSY

Although AWZ8288 and AWZ8295 are different in part number, they consist of the same components.

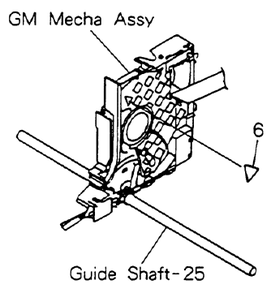
HOOD SW ASSY

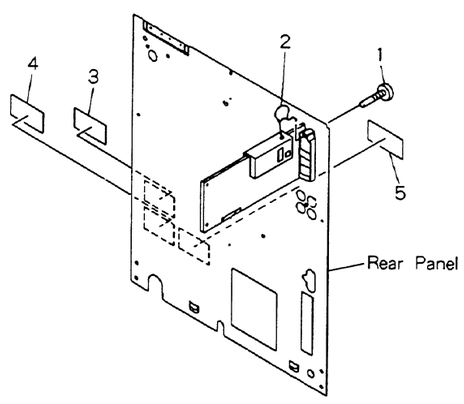
Although AWZ8290 and AWZ8296 are different in part number, they consist of the same components.

■ EXPLODED VIEWS

• EXTERIOR SECTION

Note : The numbers on the exterior section correspond to the numbers in the remarks column of the comparative table.
Refer to "CONTRAST OF MISCELLANEOUS PARTS".



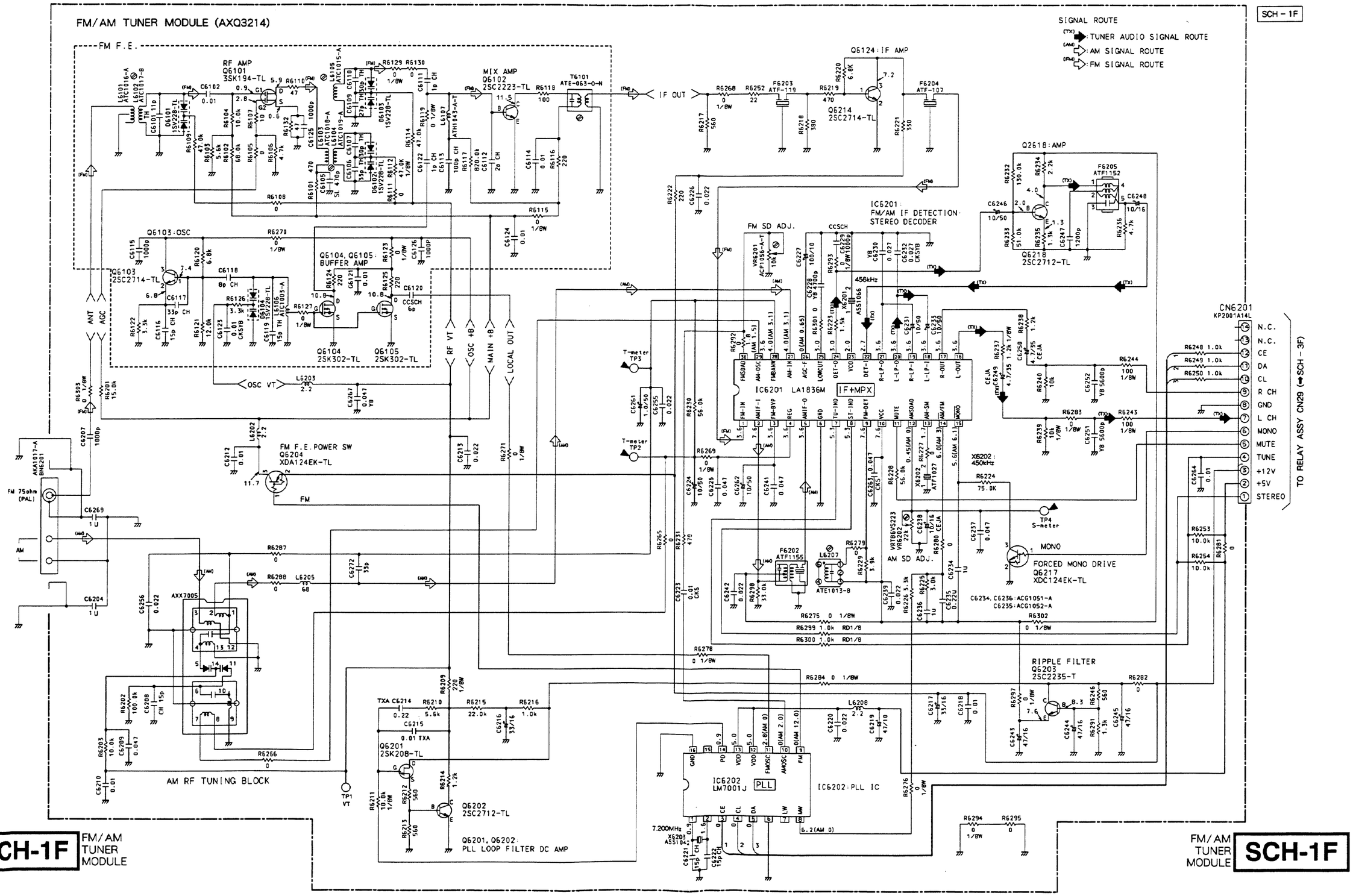


■ PCB PARTS LIST

Mark	No.	Description	Part No.
FM/AM TUNER MODULE (AXQ3214)			
SEMICONDUCTORS			
	IC6201		LA1836M
	IC6202		LM7001J
	Q6102		2SC2223
	Q6203		2SC2235
	Q6202, Q6218		2SC2712
	Q6103, Q6214		2SC2714
	Q6201		2SK208
	Q6104, Q6105		2SK302
	Q6101		3SK194
	Q6204		XDA124EK
	Q6217		XDC124EK
	D6101-D6104		1SV228
COILS AND FILTERS			
	L6106		ATC1003
	L6105		ATC1015
	L6101		ATC1016
	L6102		ATC1017
	L6103		ATC1018
	L6104		ATC1019
	L6207(10.7MHz)		ATE1013
	F6204		ATF-107
	F6203		ATF-119
	F6205		ATF1152
	F6202(450KHz)		ATF1155
	L6107(2.2μH)		ATH1043
	L6202, L6203, L6208		LCTA2R2J3225
	L6205		LCTA680J3225
TRANSFORMER			
	T6101		ATE-063
CAPACITORS			
	C6204, C6234, C6236, C6269(1μF/16V)		ACG1051
	C6120		CCSCH060D50
	C6229		CCSCH102J50
	C6111, C6122		CCSQCH010C50
	C6112		CCSQCH020C50
	C6118		CCSQCH080D50
	C6113		CCSQCH101J50
	C6116, C6208, C6221, C6222		CCSQCH150J50
	C6117		CCSQCH330J50
	C6272		CCSQSL330J50
	C6105		CCSQSL471J50
	C6101		CCSQTH110J50
	C6119		CCSQTH150J50
	C6109		CCSQTH270J50
	C6107, C6110		CCSQTH300J50
	C6106		CCSQTH330J50
	C6261		CEAS010M50
	C6224, C6231, C6233, C6246, C6262		CEAS100M50
	C6227		CEAS101M10
	C6216, C6217		CEAS330M16
	C6219		CEAS470M10
	C6243-C6245		CEAS470M16
	C6238, C6248		CEJA100M16
	C6249, C6250		CEJA4R7M35
	C6215		CFTXA103J50
	C6214		CFTXA224J50
	C6115, C6125, C6126, C6207		CKSQYB102K50
	C6102, C6114, C6121, C6124, C6210		CKSQYB103K50
	C6264		CKSQYB103K50
	C6247		CKSQYB122K50
	C6213		CKSQYB223K50
	C6230		CKSQYB273K50
	C6228		CKSQYB472K50
	C6209, C6237, C6267		CKSQYB473K50
	C6251, C6252		CKSQYB562K50
	C6212, C6218		CKSQYF103Z50
	C6220, C6226, C6239, C6242		CKSQYF223Z50
	C6255, C6256		CKSQYF223Z50
	C6235		CKSQYF224Z25
	C6225, C6241		CKSQYF473Z50
	C6123		CKSYB103K50
	C6232		CKSYB273K50
	C6223		CKSYF103Z50
	C6263		CKSYF473Z50
RESISTORS			
	R6299, R6300		RD1/6PM102J
	R6115, R6119, R6123, R6127, R6129		RS1/8S000J
	R6268-R6271, R6275, R6276, R6278		RS1/8S000J
	R6283, R6284, R6293, R6294, R6297		RS1/8S000J
	R6302, R6303		RS1/8S000J
	R6243, R6244		RS1/8S101J
	R6211, R6239		RS1/8S103J
	R6237		RS1/8S122J
	R6209		RS1/8S221J
	R6112		RS1/8S473J
	VR6201(10kΩ)		ACP1056
	VR6202		VRT6YS223
	Other Resistors		RS1/10S□□□J
OTHERS			
	X6203	CRYSTAL RESONATOR(7.200MHz)	ASS1042
	X6201	CERAMIC RESONATOR(456KHz)	ASS1066
	X6202	CERAMIC RESONATOR(450KHz)	ATF1027
	BN6201	2P TERMINAL WITH PAL	AKA1017
	CN6201	14P SOCKET	KP2101A14L
		AF RF TUNING BLOCK	AXX1005

3. SCHEMATIC AND PCB DIAGRAMS

3.1 FM/AM TUNER MODULE



NOTE FOR SCHEMATIC DIAGRAMS (Type 1A)

1. **When ordering service parts, be sure to refer to "PARTS LIST of EXPLODED VIEWS" or "PCB PARTS LIST".**

2. **Since these are basic circuits, some parts of them or the values of some components may be changed for improvement.**

3. **RESISTORS:**
   Unit: k:kΩ, M:MΩ, or Ω unless otherwise noted.
   Rated power: 1/4W, 1/6W, 1/8W, 1/10W unless otherwise noted.
   Tolerance:(F):±1%, (G):±2%, (K):±10%, (M):±20% or ±5% unless otherwise noted.

4. **CAPACITORS:**
   Unit : p:pF or μF unless otherwise noted.
   Ratings : capacitor (μF) / voltage (V) unless otherwise noted.
   Rated voltage : 50V except for electrolytic capacitors.

5. **COILS:**
   Unit : m:mH or μH unless otherwise noted.

6. **VOLTAGE AND CURRENT:**
   ▭ : Signal voltage at rated output.
   ▭ or ←V :
   DC voltage (V) at no input signal unless otherwise noted.
   Value in ( ) is DC voltage at rated power.
   ⇦mA or ←mA :
   DC current at no input signal unless otherwise noted.

7. **OTHERS:**
   - ⊘ or ◉ : Adjusting point.
   - ◀ : Measurement point.
   - The ⚠ mark found on some component parts indicates the importance of the safety factor of the parts. Therefore, when replacing, be sure to use parts of identical designation.

8. **SCH – □ ON THE SCHEMATIC DIAGRAM:**
   - SCH– □ indicates the drawing number of the schematic diagram. (SCH stands for schematic diagram.)

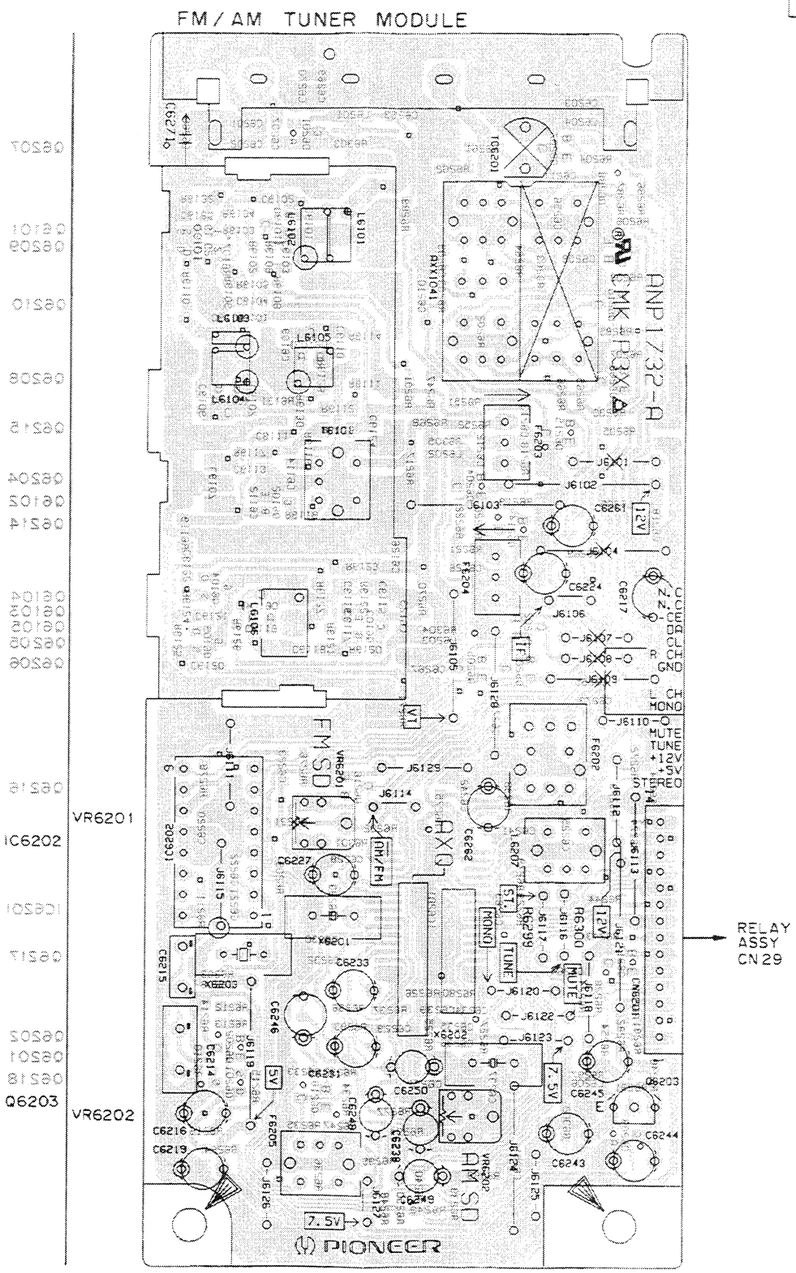
NOTE FOR PCB DIAGRAMS:

1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

Symbol in PCB Diagrams	Symbol in Schematic Diagrams	Part Name
Q504 (E, C, B) Q504	Q504 Q504	Transistor
D203 D203	D203	Diode
C513 C513	C513	Capacitor (Polarized)

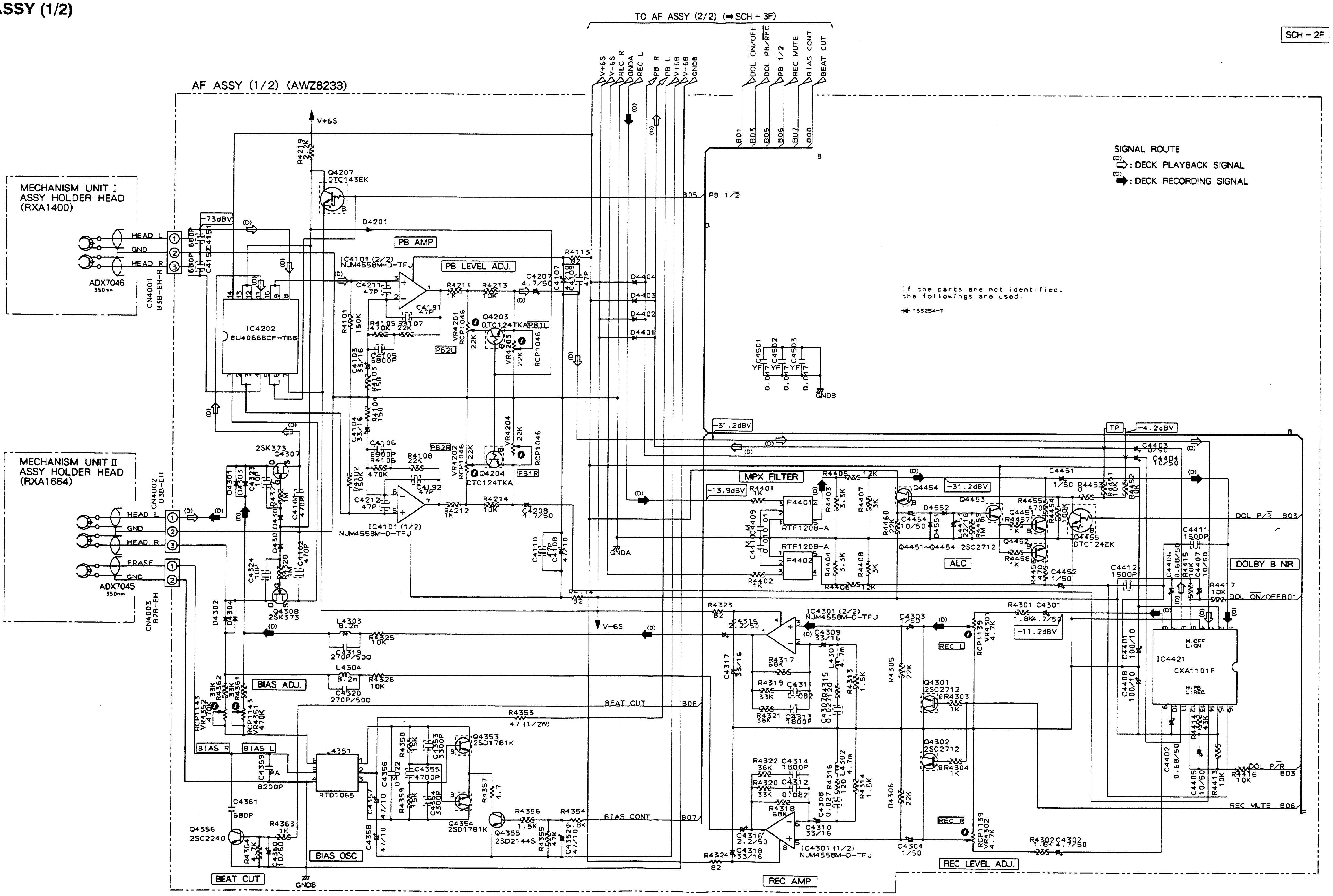
3. The transistor terminal marked with E or ⊏ shows the emitter.
4. The diode terminal marked with ◎ or ⊂ shows cathode side.
5. The capacitor terminal marked with ◎ or ⊏ shows negative terminal.

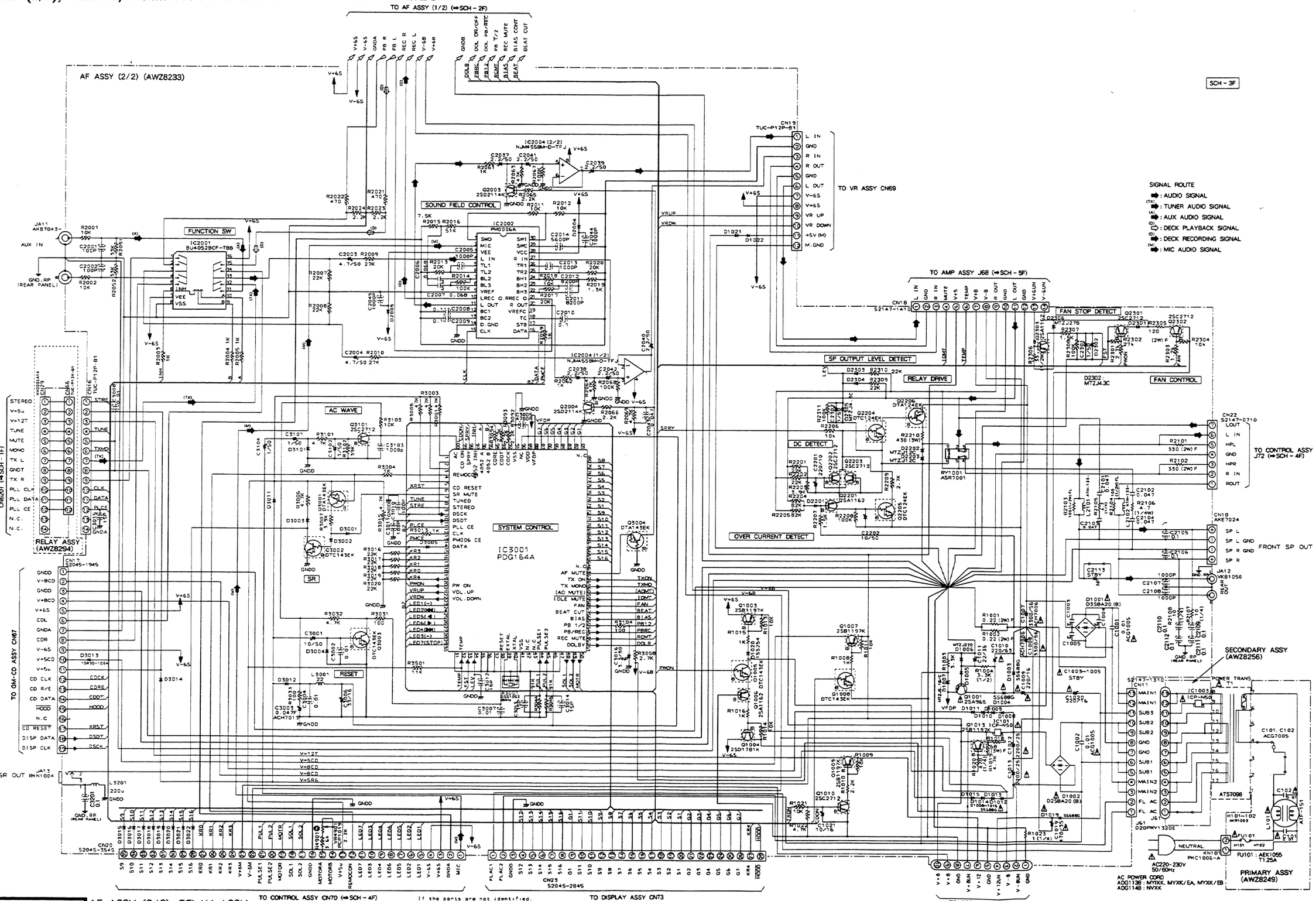
PCB – 1F



- This diagram is viewed from the mounted parts side.
- The parts mounted on this PCB include all necessary parts for several destinations.
  For further information for respective destinations, be sure to check with the schematic diagram.

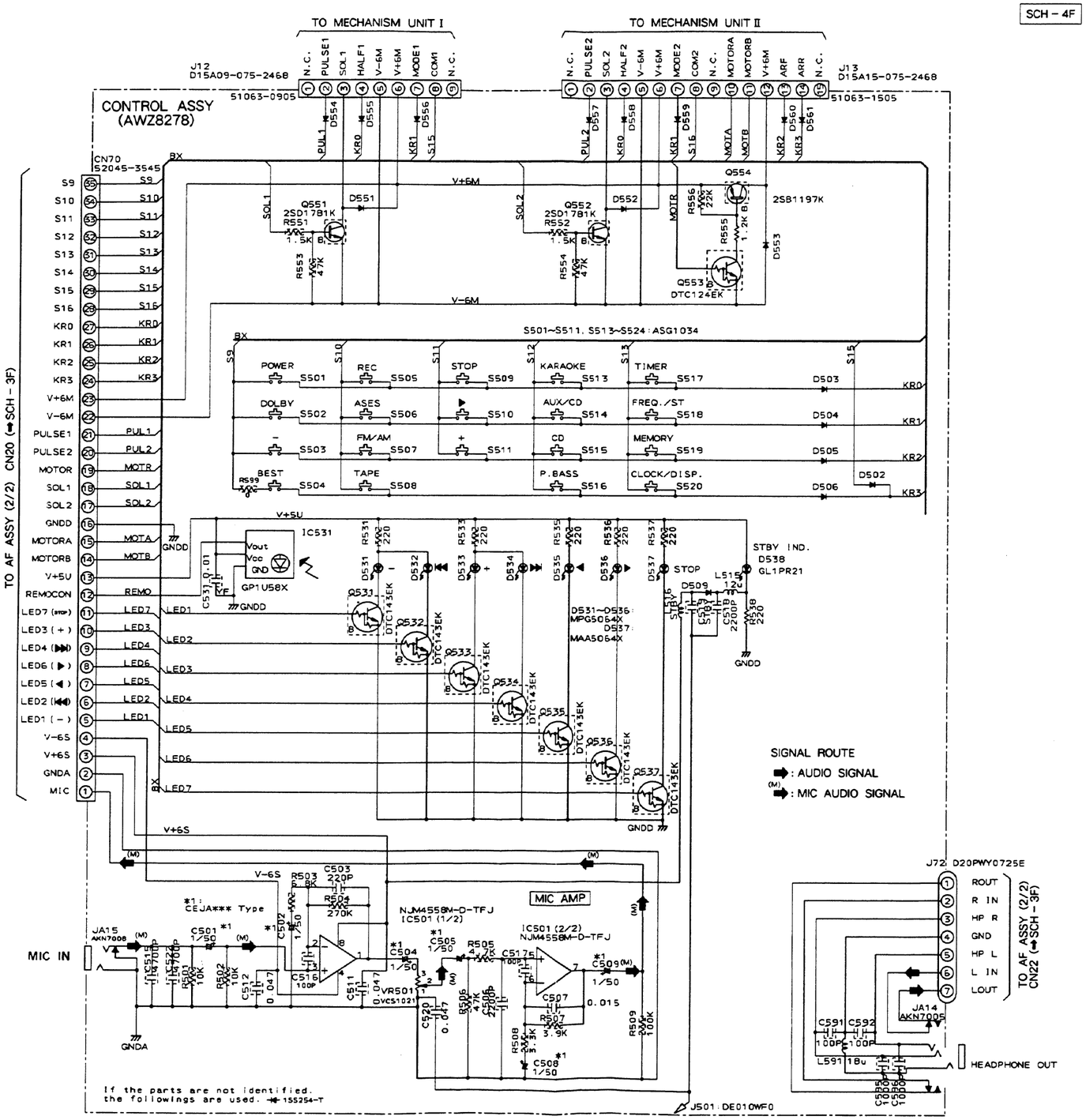
3.2 AF ASSY (1/2)


TO AF ASSY (2/2) (➡SCH - 3F)
SCH - 2F
AF ASSY (1/2) (AWZ8233)
V+6S
V-6S
REC R
GNDA
REC L
PB R
PB L
V+6B
V-6B
GNDB
DOL ON/OFF
DOL PB/REC
PB 1/2
REC MUTE
BIAS CONT
BEAT CUT
SIGNAL ROUTE
(D) : DECK PLAYBACK SIGNAL
(D) : DECK RECORDING SIGNAL
If the parts are not identified, the followings are used.
1SS254-T
MECHANISM UNIT I
ASSY HOLDER HEAD
(RXA1400)
HEAD L
GND
HEAD R
ADX7046
350mm
CN4001
B3B-EH-R
-73dBV
MECHANISM UNIT II
ASSY HOLDER HEAD
(RXA1664)
CN4002
B3B-EH
ERASE
ADX7045
350mm
CN4003
B2B-EH
Q4207
DTC143EK
D4201
PB AMP
PB LEVEL ADJ.
IC4101 (2/2)
NJM4558M-D-TFJ
IC4101 (1/2)
NJM4558M-D-TFJ
IC4202
BU4066BCF-TBB
Q4203
DTC124TKA
Q4204
DTC124TKA
VR4201
VR4202
VR4203
VR4204
RCP1046
PB1L
PB1R
PB2L
PB2R
2SK373
Q4307
Q4308
2SK373
-31.2dBV
-13.9dBV
MPX FILTER
F4401
F4402
RTF1208-A
Q4454
Q4453
Q4451
Q4452
Q4455
DTC124EK
Q4451~Q4454 : 2SC2712
ALC
TP
-4.2dBV
DOLBY B NR
IC4421
CXA1101P
H:OFF
L:ON
H:PB
L:REC
DOL P/R B03
DOL ON/OFF B01
REC MUTE B06
BIAS ADJ.
BIAS R
BIAS L
L4351
RTD1065
Q4353
2SD1781K
Q4354
2SD1781K
Q4355
2SD2144S
Q4356
2SC2240
BIAS OSC
BEAT CUT
BEAT CUT B08
BIAS CONT B07
GNDB
IC4301 (2/2)
NJM4558M-D-TFJ
IC4301 (1/2)
NJM4558M-D-TFJ
Q4301
2SC2712
Q4302
2SC2712
REC L
REC R
VR4301
VR4302
RCP1139
-11.2dBV
REC AMP
REC LEVEL ADJ.


AF ASSY (2/2) (AWZ8233)
TO AF ASSY (1/2) (⇒SCH-2F)
SCH-3F
SIGNAL ROUTE
: AUDIO SIGNAL
(TX): TUNER AUDIO SIGNAL
(A): AUX AUDIO SIGNAL
(D): DECK PLAYBACK SIGNAL
(D): DECK RECORDING SIGNAL
(M): MIC AUDIO SIGNAL
TO VR ASSY CN69
TO AMP ASSY J68 (⇒SCH-5F)
TO CONTROL ASSY J72 (⇒SCH-4F)
FRONT SP OUT
SECONDARY ASSY (AWZ8256)
PRIMARY ASSY (AWZ8249)
RELAY ASSY (AWZ8294)
TO FM/AM TUNER MODULE CR6201 (⇒SCH-1F)
TO GM-CD ASSY CN67
SR OUT
AUX IN
FUNCTION SW
SOUND FIELD CONTROL
AC WAVE
SYSTEM CONTROL
IC3001 PDG164A
RESET
SR
FAN STOP DETECT
FAN CONTROL
SP OUTPUT LEVEL DETECT
RELAY DRIVE
DC DETECT
OVER CURRENT DETECT
TO CONTROL ASSY CN70 (⇒SCH-4F)
TO DISPLAY ASSY CN73
TO REG ASSY J14
If the parts are not identified, the followings are used.
⇒ 15525A-T
AC POWER CORD
ADG1136 : MYXK, MYXK/EA, MYXX/EB
ADG1148 : NYXK
AC220-230V 50/60Hz
SCH-3F
AF ASSY (2/2), RELAY ASSY, PRIMARY ASSY, SECONDARY ASSY

3.4 CONTROL ASSY

SCH – 4F



4. ADJUSTMENTS

Adjustment of XR-P560F/MYIXK, MYXK/EA,MYXK/EB and NVXK are the same as thoes of XR-P260F/KUXJ except for the following:

4.1 TUNER SECTION

■ FM TUNER SECTION

- Set the mode selector to FM BAND.
- Connect the wiring as shown in Fig. 1

Step No.	Adjustment Title	FM SG (1kHz, ± 75kHz dev.)		Reception Frequency Display	Adjustment Location	Specifications
		Frequency (MHz)	Level (dBμV)			
1	Center Adjustment	98	80	98MHz	L6207	Adjust so that the DC voltage between IC6201-Pin 4 and Pin 28 (or ⊕ leads of C6224 and C6261) becomes 0V ± 50mV.
2	Front End Sensitivity Adjustment	106	Low input (0 to 30)	106MHz	L6104 L6105 L6102 T6101	After adjusting L6104 and L6105 so that the DC voltage between IC6201-Pin 12 and GND (or ⊕ leads of C6238 and GND) becomes at maximum level, adjust T6101 and L6102.
3	Stereo Distortion	98	80	98MHz	T6101	Minimize the distortion with 1/8 rotation of the core.
4	TUNED IND. Lighting Level	98	15 (± 2 dB)	98MHz	VR6201	Adjust so that the indicator of TUNED IND. starts to light up.

Note :
- Before adjusting, make sure there is no gap between L6101 and L6102 and between L6103 and L6104. If there is a gap between them, bring them into contact with each other first, and then make adjustments.
- Make indicator adjustments in order of AM → FM.
- Adjustment sequence : L6104 → L6105 → L6102 → T6101

■ AM TUNER SECTION

- Set the mode selector to AM BAND.
- Connect the wiring as shown in Fig. 1

Step No.	Adjustment Title	AM SG (400Hz, 30% Mod.)		Reception Frequency Display	Adjustment Location	Specifications
		Frequency (kHz)	Level (dBμV/m)			
1	TUNED IND. Lighting Level	999	47 (± 2)	999kHZ	VR6202	Adjust so that the indicator of TUNED IND. starts to light up.

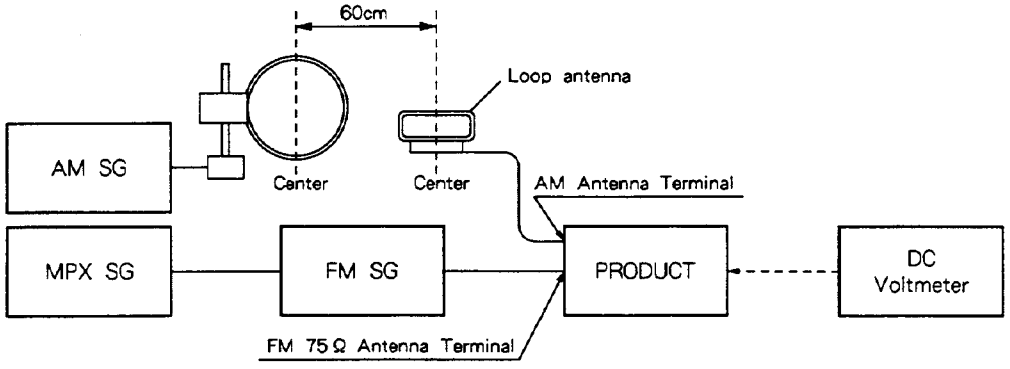


Fig. 1 AM and FM Adjustment Wiring Diagram

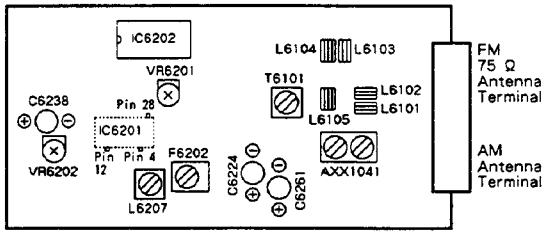
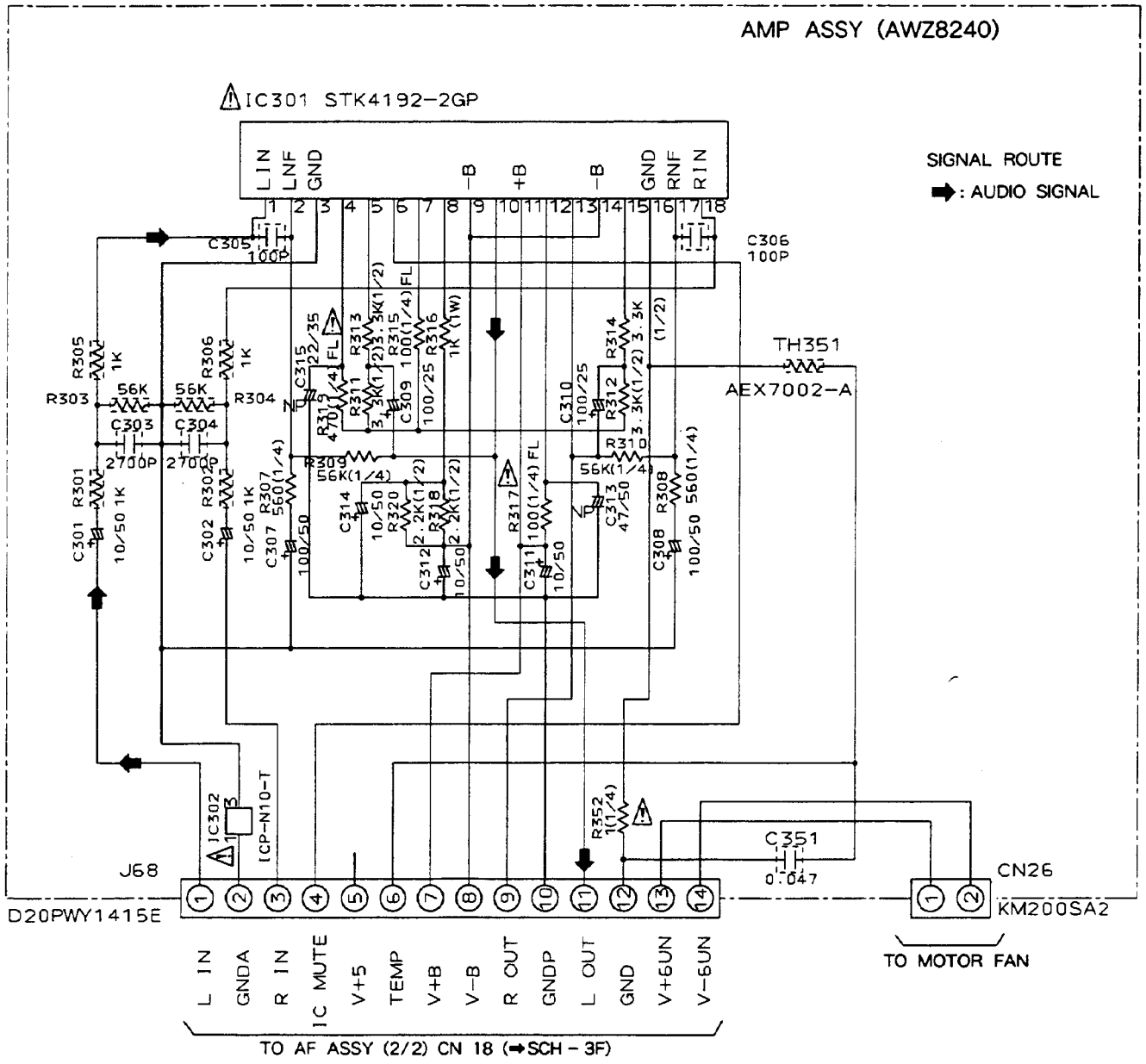


Fig. 2 Adjustment Point

3.5 AMP ASSY

SCH – 5F



AMP ASSY **SCH-5F**

Service Manual

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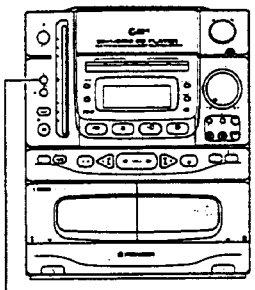

(DEMO)

PION-04890

SERVICE GUIDE

ORDER NO.
RRV1430

STEREO FILE-TYPE CD CASSETTE DECK RECEIVER

XR-P760F

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2. HOW TO DIAGONISE CIRCUIT WHEN PRIMARY FUSE BLOWS 9
3. FLOW CHART 15
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1. DISASSEMBLY (各部のはずしかた)

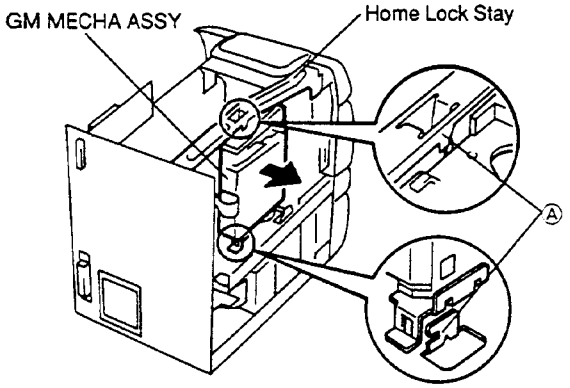
■ REMOVING THE GM MECHA ASSY (GMメカASSYのはずしかた)

NOTE : Before removing the GM Mecha Assy, make sure you turn the power OFF and disconnect the AC power cord.

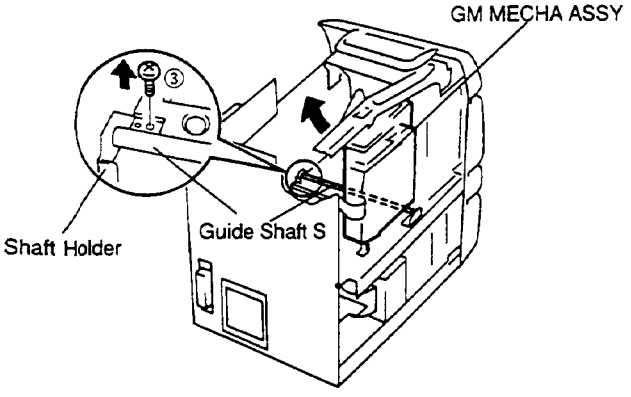
(注意：はずす前に必ず電源を切ってから電源コードを抜いてください。)

① Remove the bonnet. (Since the front of the home lock stay makes contact, hold the bonnet in that place and pull and lift at the same time.)
(ボンネットをはずす。ホームロックステイのフロント側があたるので、その箇所のボンネットを持ち上げながら引く。)

② Move the GM Mecha ASSY to the right (viewed from the rear), watching out for the 2 Lock locations (partⒶ).
(GMメカASSYをロック2ケ所(Ⓐ部)を解除して、リア側から見て右端に移動する。)



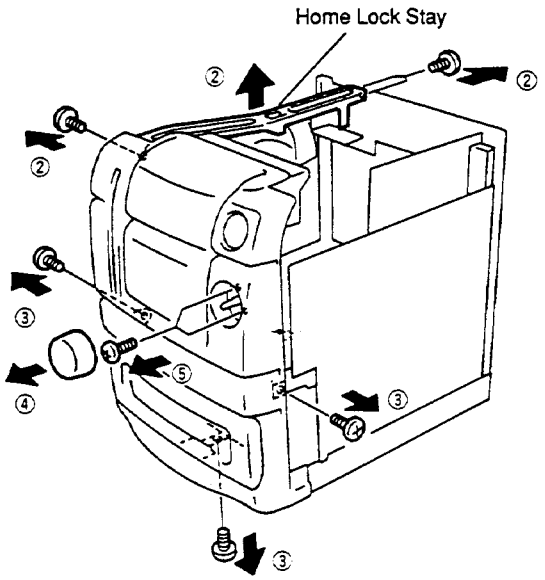
③ Remove the shaft holder that fixes guide shaft S in place (screw ③), and remove the GM Mecha ASSY together with guide shaft S.
(ガイドシャフトSを固定しているシャフトフォルダーをはずし(ネジ③) ガイドシャフトSごとGMメカASSYをはずす。)



■ REMOVING THE FRONT PANEL (フロントパネルのはずしかた)

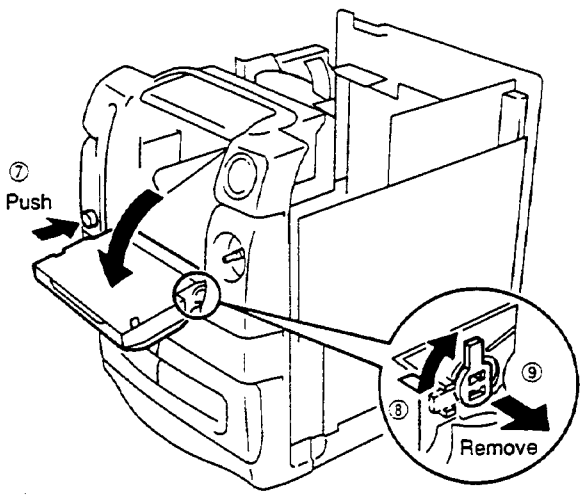
① Remove the bonnet.
(ボンネットをはずす。)

②–⑤



⑥ Remove the HEADPHONE ASSY wire rod.
(HEADPHONE ASSYの線材をはずす。)

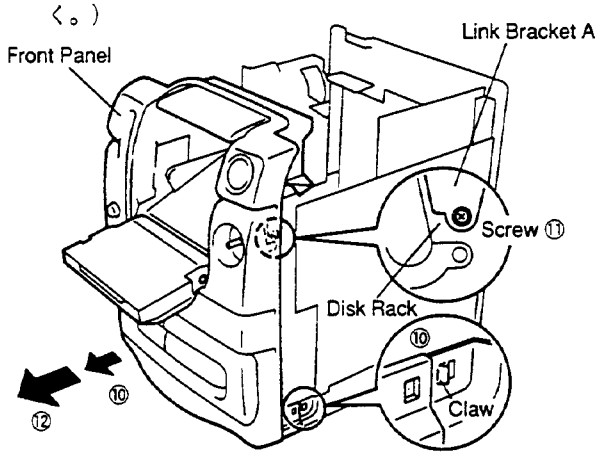
⑦–⑨



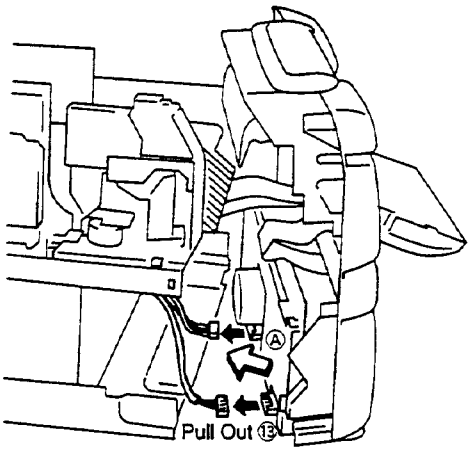
⑩ Shift the front panel slightly toward you, being cautious of the left and right catches on the chassis and sub chassis.
（フロントパネルをシャーシとサブシャーシの左右のツメに注意しながら手前に少しずらす。）

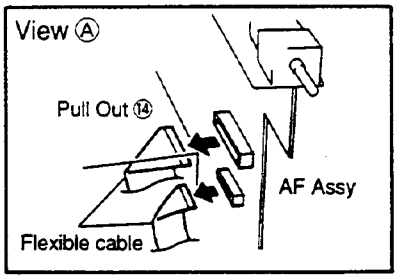
⑪ Remove screw ⑪ and remove link bracket A from the disc rack.
（ネジ⑪をはずしてディスクラックからリンクカナグAをはずす。）

⑫ Pull the front panel further toward you, and remove it from the chassis.
（フロントパネルをさらに手前に引き、シャーシから抜く。）



⑬, ⑭

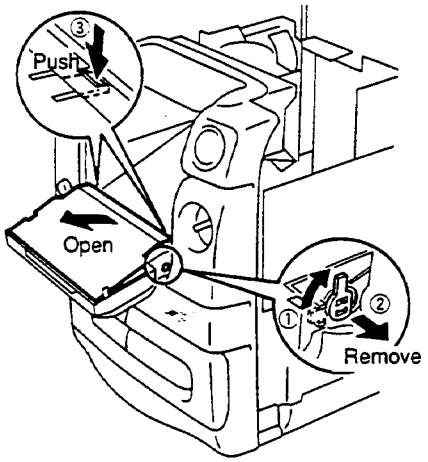




■ MICRO COMPUTER IC REPLACEMENT METHOD (マイコンICの交換方法)

①, ②, ③

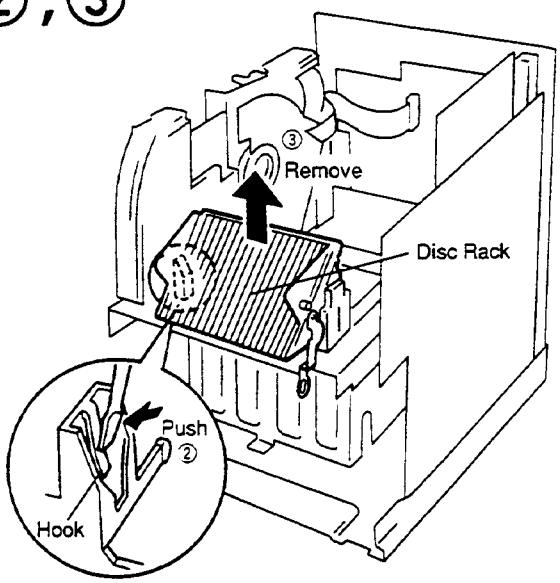
The micro computer IC can be easily replaced when the front panel has been removed.



■ REMOVING THE DISC RACK (ディスクラックのはずしかた)

① Remove the front panel.
（フロントパネルをはずす。）

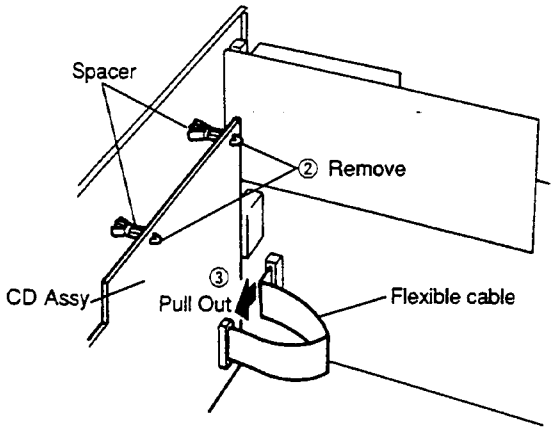
②, ③



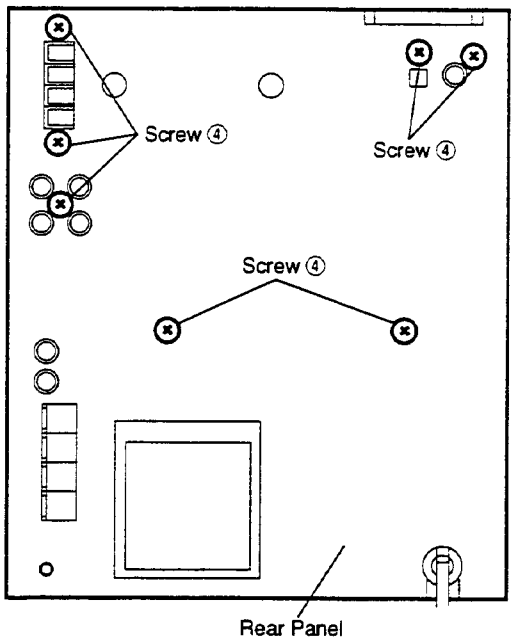
■ REMOVING THE POWER AMP MODULE (パワーアンプモジュールのはずしかた)

① Remove the bonnet and home lock stay.
(Refer to "■ Removing the Front Panel")
(ボンネットとホームロックステイをはずす。)
("フロントパネルのはずしかた"参照)

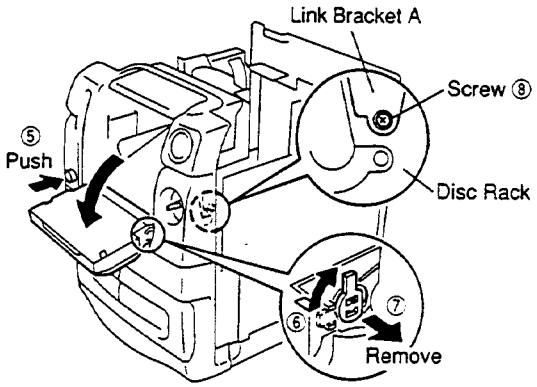
②, ③
Remove the spacer from the CD ASSY.
(CD ASSYからロッキングカードスペーサをはずす。)



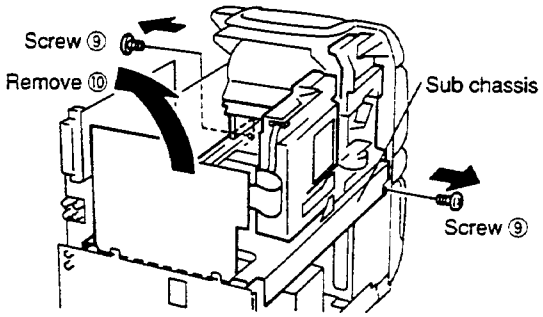
④ Remove the rear panel (screw ④ x 7).
(リアパネルをはずす。(ネジ④ 7本))



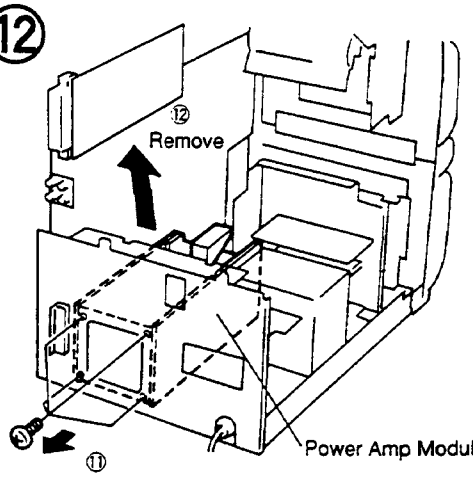
⑤–⑧
Remove screw ⑧ and remove link bracket A from the disc rack.
(ネジ⑧をはずしてディスクラックからリンクカナグAをはずす。)



⑨, ⑩
Remove screw ⑨ and remove the sub chassis together with the GM Slot-In Mecha ASSY and the GM Mecha ASSY.
(ネジ⑨をはずしてGMスロットインメカ、GMメカごとサブシャーシをはずす。)

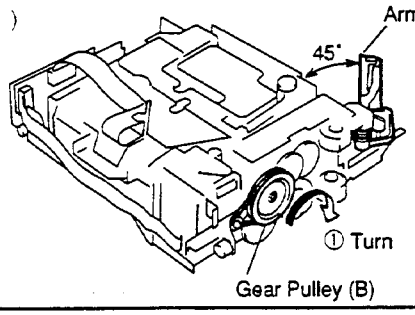


⑪, ⑫

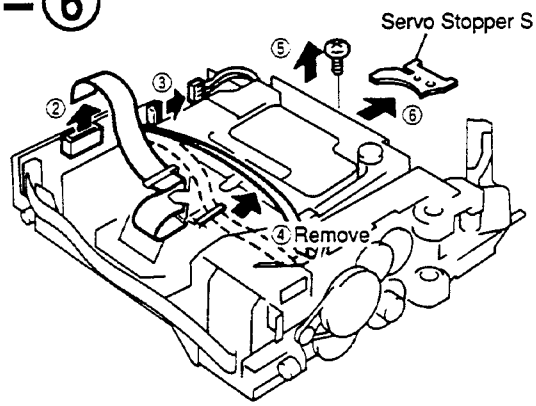


■ REMOVING THE SERVO MECHANISM ASSY GM
(サーボメカASSY GMのはずしかた。)

① Turn gear pulley (B) and position Arm (A) as shown below.
(ギアプーリーBを回して、アームAを下図の位置にする。)

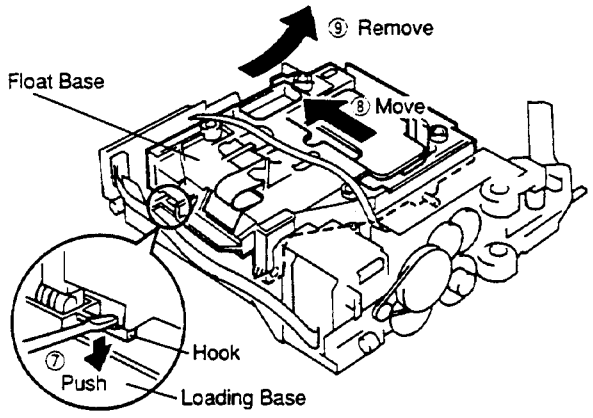


②-⑥



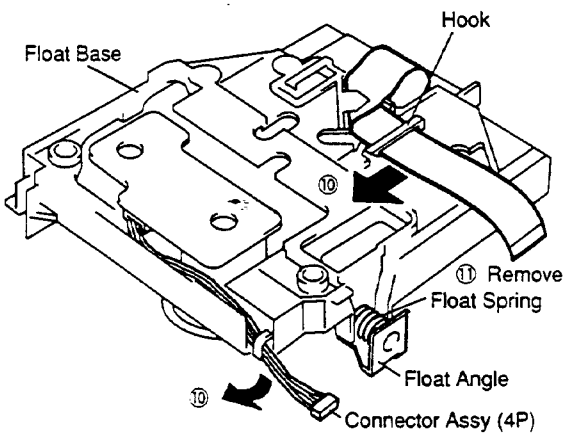
⑦-⑨

Slide the float base in the direction of the arrow ⑧ while pressing down on the loading base hook, and, lifting it gently, pull it out in the direction of the arrow ⑨.
(ローディングベースのフックを下に押しながらフロートベースを矢印⑧方向にスライドさせ、かるく持ち上げながら矢印⑨方向に引き抜く。)

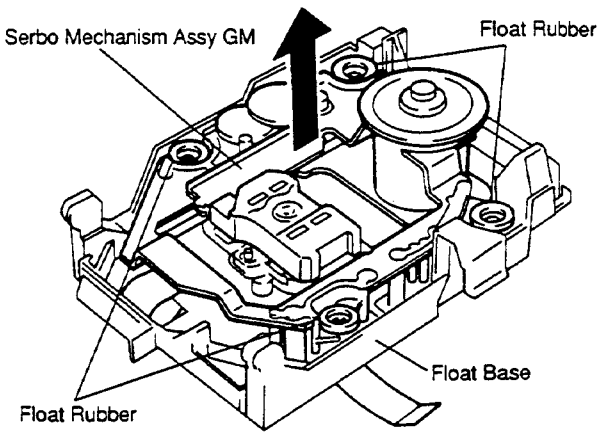


⑩ Remove the Pickup ASSY flexible cable and the connector ASSY (4P) from the float base.
(ピックアップASSYのフレキシブルケーブルとコネクタASSY(4P)をフロートベースのフックからはずす。)

⑪ Remove the float spring. (To install this part, line up the float angle side of the Servo Mechanism ASSY GM first, and press down on the float base side.)
(フロートスプリングをはずす。)(取り付ける時は、サーボメカASSY GMのフロートアングル側を先に合わせフロートベース側を下に押し込むとよい)



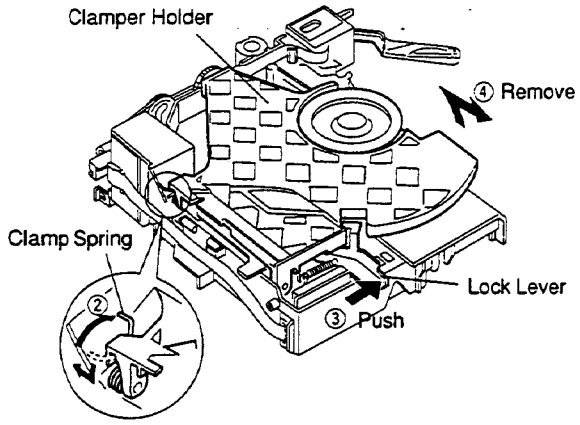
⑫ Remove the float rubber from the Servo Mechanism ASSY GM. At this time the float rubber should remain on the float base side. (To install it on the float base when it has been removed, push it into place with a thin cylindrical object.
(フロームゴムからサーボメカASSY GMをはずす。この時フローゴムはフロートベース側に残すこと。)(はずれたとき、フロートベースに取付けるには細い棒状のもので押し込むと入る。)



■ REMOVING THE ARM (A) (アーム(A)のはずしかた)

① Remove the float base together with the Servo Mechanism ASSY GM. (Refer to Steps ①–⑨ for "■ Removing the Servo Mechanism ASSY GM" .)
(サーボメカASSY GMごとフロートベースをはずす(サーボメカASSYのはずしかた①-⑨参照。)

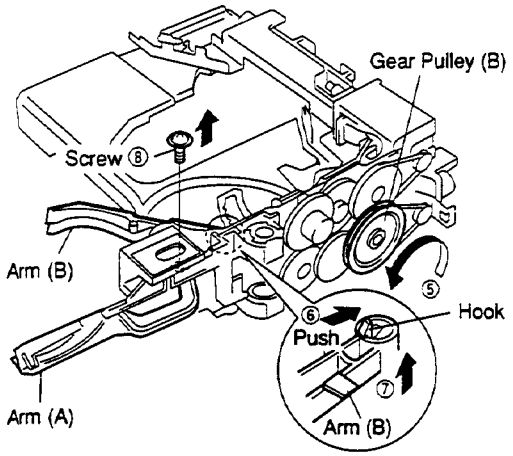
②-④
Remove the clamp spring and remove the clamp holder while pressing down on the lock lever.
(クランプスプリングをはずし、ロックレバーを押しながらクランパーホルダーをはずす。)



⑤ Turn gear pulley (B) and position Arm (A) as shown below.
(ギアプーリー(B)を回して、アーム(A)を下図の位置にする。)

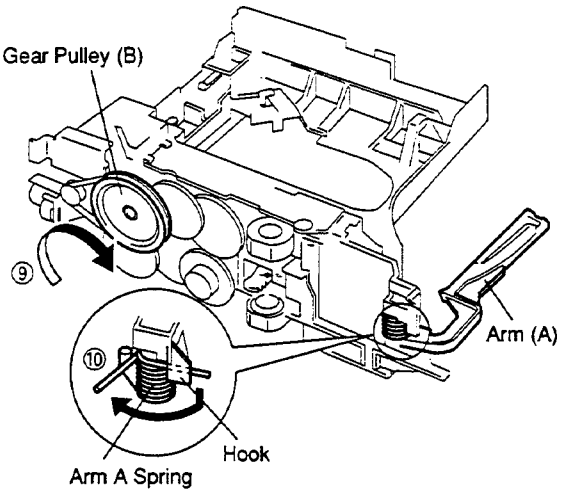
⑥,⑦
Remove Arm (B) while pressing the hook in the direction of the arrow.
(フックを矢印方向に押しながらアーム(B)をはずす。)

⑧ Remove screw ⑧. (ネジ⑧をはずす。)

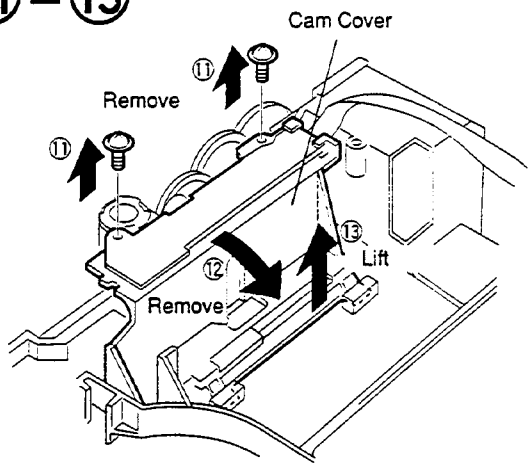


⑨ Turn gear pulley (B) and position Arm (A) as shown in below.
(ギアプーリー(B)を回してアーム(A)を下図の位置にする。)

⑩ Remove the Arm A spring from its hook.
(アームAスプリングをフック部からはずす。)



⑪-⑬

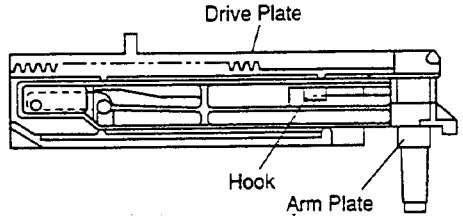


⑭ Remove drive plate, Arm plate, Arm A spring and Arm (A). (Refer to Steps ③-④ on page 7.)
(ドライブプレート、アームプレート、アームAスプリング、アーム(A)をはずす。)(7ページの③-④ 参照)

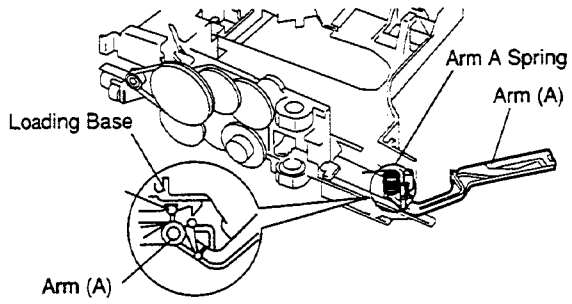
■ FOR REASSEMBLY, REVERSE THE DISASSEMBLY PROCEDURE, AND IN ADDITION CARRY OUT THE FOLLOWING ITEMS.

(組み立てる時は、はずしかたの手順を逆に行う、但し以下の項目を行うこと。)

① Assemble the arm plate as shown below, watching out for the drive plate hook.
(ドライブプレートのフックに注意して下図の位置にアームプレートを組み合わせる。)

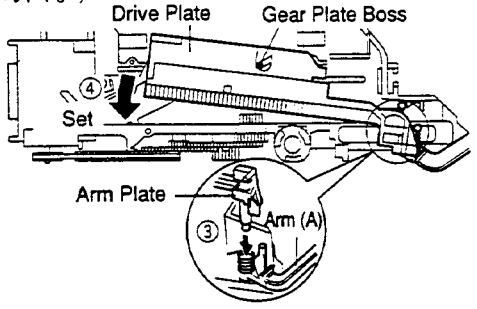


② Place Arm (A) and the Arm A spring on the loading base, being careful to keep them in the position shown in below.
(アーム(A)とアームAスプリングを下図のように合わせ、位置に注意してローディングベースにのせる。)

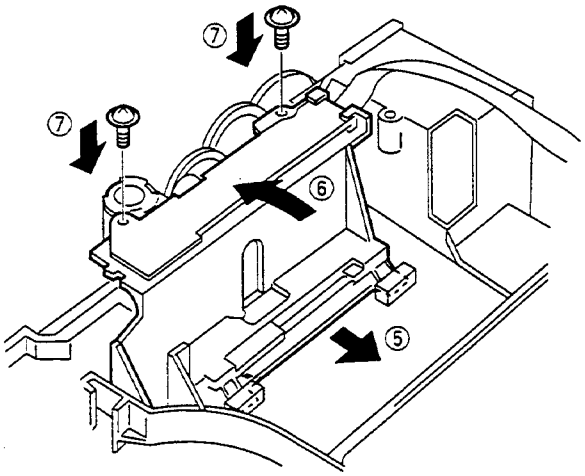


③ Set the drive plate and arm plate, which were assembled in Step ①, on the Arm (A) side as shown below.
At this time be careful to keep Arm (A) in the position described in Step ②.
(①でセットしたドライブプレートを下図のようにアーム(A)側からセットする、この時アーム(A)が②で合わせた位置からずれないように注意する。)

④ Insert the gear plate boss into the drive plate groove and pull it toward you.
(ギアプレートのボスをドライブプレートの溝に入れ手前に引く。)

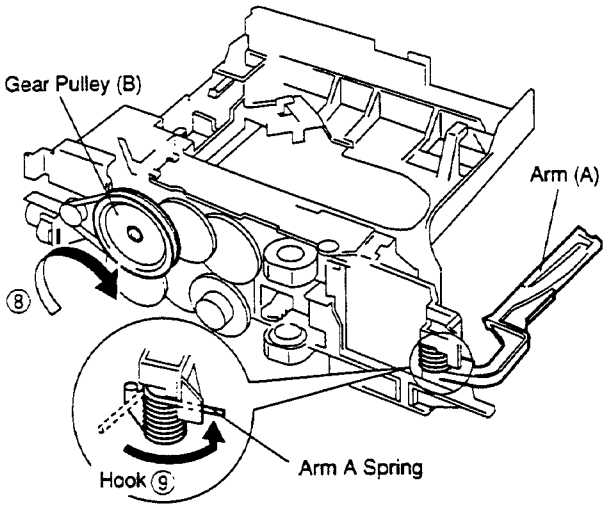


⑤-⑦

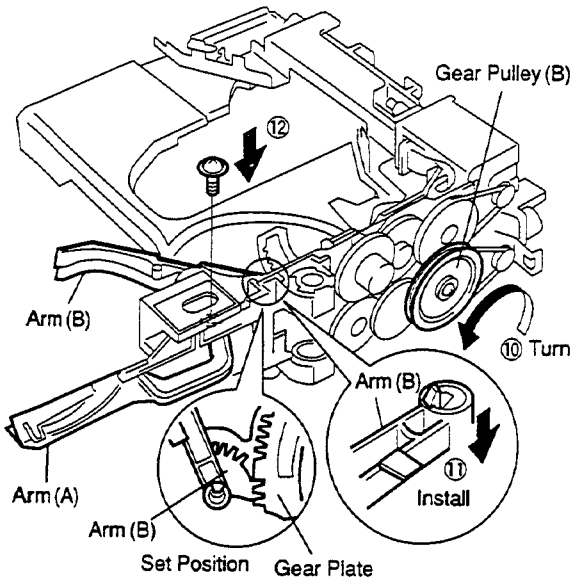


⑧ Turn gear pulley (B) and position Arm (A) as shown in below.
(ギアプーリー(B)を回してアーム(A)を下図の位置にする。)

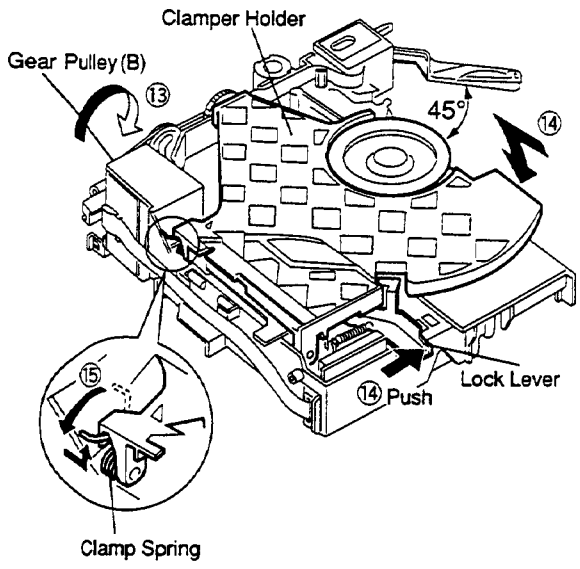
⑨



⑩ – ⑫

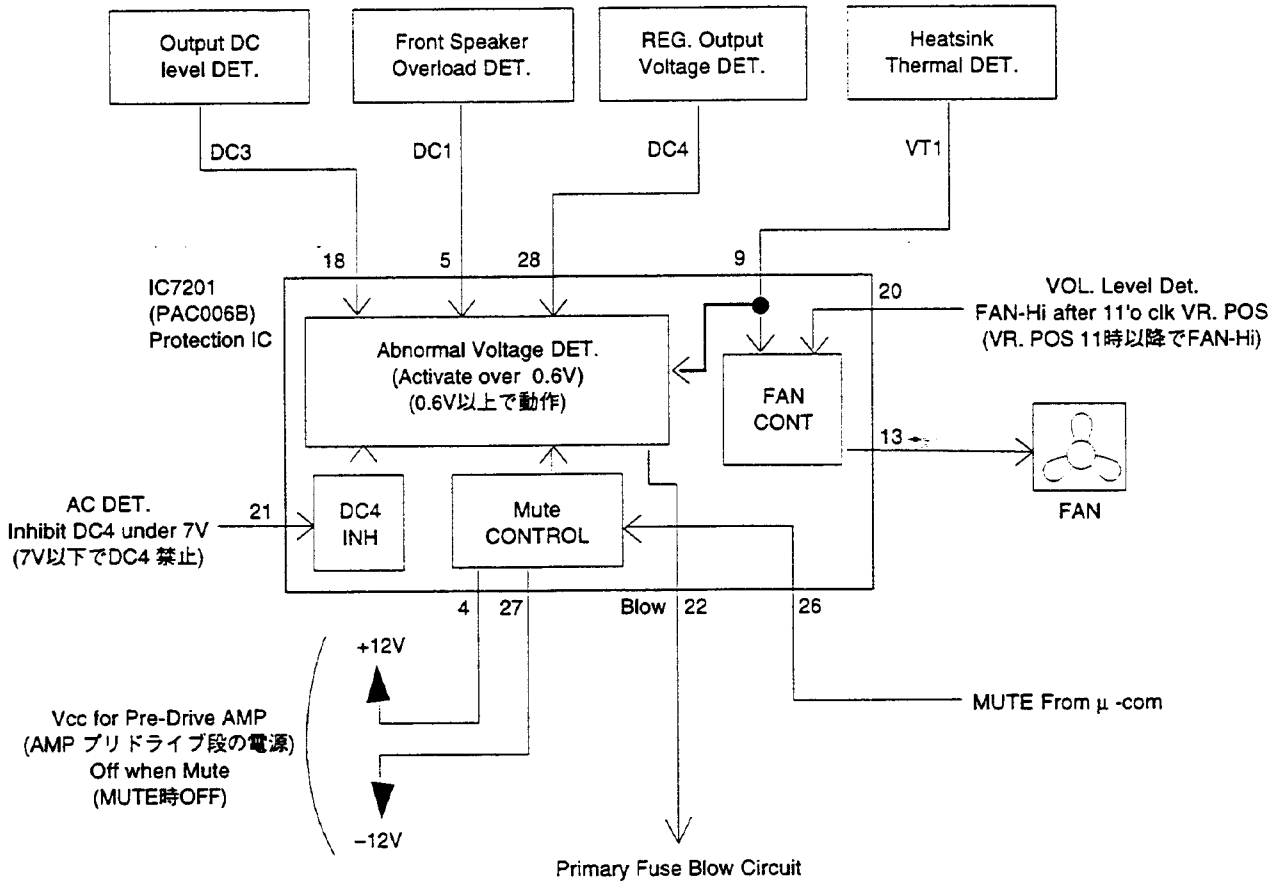

Gear Pulley (B)
⑫
Arm (B)
⑩ Turn
Arm (B)
⑪
Install
Arm (A)
Arm (B)
Set Position
Gear Plate

⑬ – ⑮


Clamper Holder
Gear Pulley (B)
⑬
45°
⑭
⑮
⑭ Push
Lock Lever
Clamp Spring

2. HOW TO DIAGONISE CIRCUIT WHEN PRIMARY FUSE BLOWS
(パワーアンプモジュール診査方法)

2.1 OUTLINE OF PROTECTION CIRCUIT
(保護回路の概要)



Outline of Operation

*DC1: When overload is detected at Front speaker terminal DC1 will become over ±0.6V and Protection IC will mute predrive amp circuit (±12V OFF).
(*DC2:Overload detection for rear speaker.)

*DC3: When DC voltage(over ±3DCV) is detected at output of Power amp, DC3 will become over±0.6V and will first mute predrive amp circuit for 2sec and then if does not resume normal condition Fuse blow circuit willbe activated.

*DC4: DC4 detect abnormal voltage at voltage regulator output. When becomes over ±0.6V, Fuse blow circuit will be activated.

*VT1: When temperature of the heatsink become over 105C°, VT1 will become under +7.5V and will first mute predrive amp circuit for 2sec and then if does not resume normal condition Fuse blow circuit will be activated.

(動作概要)

*DC1: DC1が±0.6V以上で フロントスピーカー端子のショートと判定、Muteをかける。(±12V OFFする)
(*DC2:リアスピーカーオーバーロード検出用端子)

*DC3: DC3が+0.6V以上でパワーアンプ出力異常と判定、MUTEを約2秒間かけ復帰しない場合は22ピンがHになりFUSE BLOW回路動作。

*DC4: DC4が+0.6V以上で電源レギュレーター部出力の異常と判定、22ピンがHになりFUSE BLOW回路動作。

*VT1: 放熱器温度 ～95℃：FAN-SPEED LOW, 95℃～ 104℃：FAN-SPEED HIGH, 105℃(VT1=+7.5V)で MUTEを2秒間かけ復帰しない場合はFUSE BLOW回路動作 。

2.2 DIAGNOSTIC FLOW CHART (診査フロー)

Primary Fuse blown
(1次側ヒューズ溶断)

Disconnect Speakers.
Unplug AC Plug.
(スピーカーを外す
ACコンセントを抜く)

Remove Bonnet and replace fuse with new one. Remove CD changer unit.
(ボンネットを開け、ヒューズを交換する
CDチェンジャー部を取り除く)

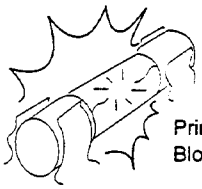
Discharge ±B1.
(±B1を放電させる)

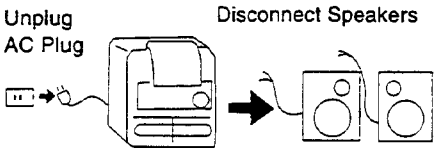
Check Power Trs. Replace if they are defective.
(テスターでパワーTRの良否を確認する)

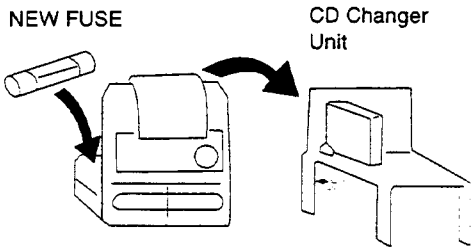
CHECK : Q7511, Q7512
Q7513, Q7514

Cut Fuse blow line by desoldering +lead of C7602.
*Remember to solder the lead after end of diagnostics.
(C7602片足を浮かしヒューズブロー回路が動作しないようにする。)
(診断が終わった後必ず
半田付けし元の状態に戻すこと)

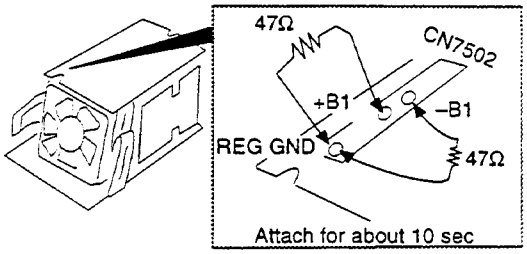
TURN TO NEXT PAGE
(次頁参照)



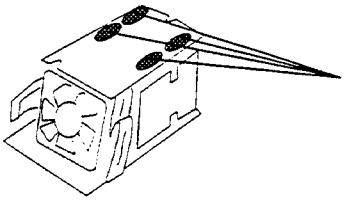




Discharge ±B1
Remove Resistors after ±B1 are discharged
(放電後、抵抗を取り外す)

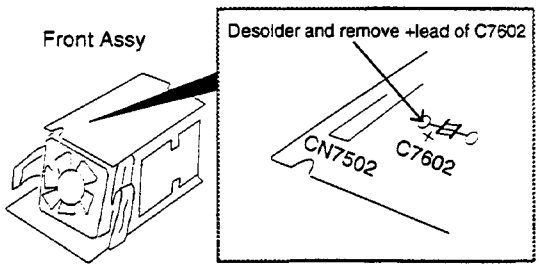


Front Assy



Check short circuit between Emitter and Collector of Q7511, Q7512, Q7513, Q7514

Front Assy



AC PLUG IN
POWER ON
(AC プラグを差し込む
パワーオン)

Check voltage at IC7201 Pin22.
(IC7201 22Pブロー電圧確認)

Blow = 0V

No Trouble inside unit.
Could be external problems.
(異常なし
セット外部要因
の可能性あり)

Blow > +3V

Check output voltage of each protection circuit.
(各保護回路出力電圧確認)
(IC7201:DC1(pin5), DC2(pin12), DC3 (pin18), DC4 (pin28), VT1 (pin9)

DC1, DC2 >+0.6V
DC1, DC2 < -0.6V

Speaker overload detected.
Check short circuit between speaker output and GND.
(スピーカー出力のオーバーロード検出
スピーカー出力ラインとGND間のショート確認)

VT1< 7. 5V

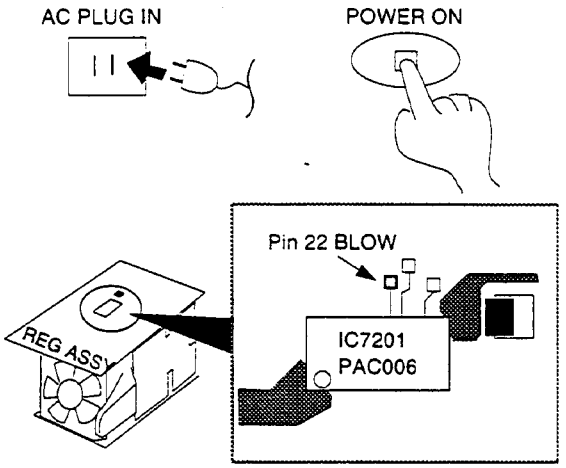
Over current detected at Heatsink thermal detection terminal.
(ヒートシンク温度検出端子のオーバーカレント検出)
CHECK: Q7301, Q7302, VR7201, FAN, IC7201

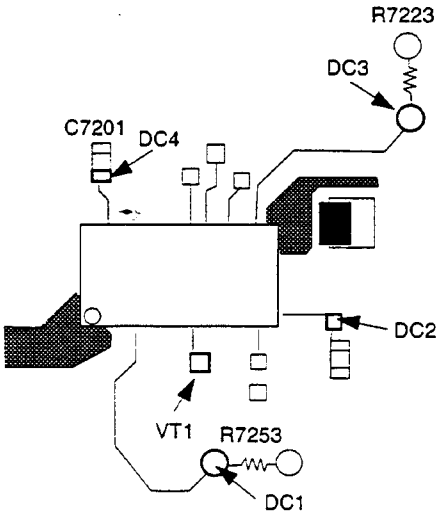
DC4>+0.6V
DC4<-0.6V

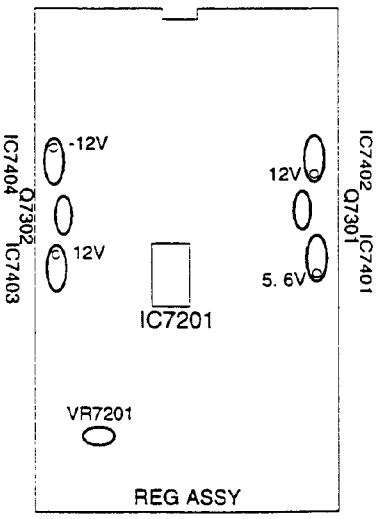
Abnormal voltage detected at output of regulators.
(レギュレター出力にて異常電圧検出)
CHECK: IC7401, IC7402, IC7403, IC7404 and Regulators in REG ASSY.

DC3>+0.6V
DC3<-0.6V

Turn to next page
(次頁参照)



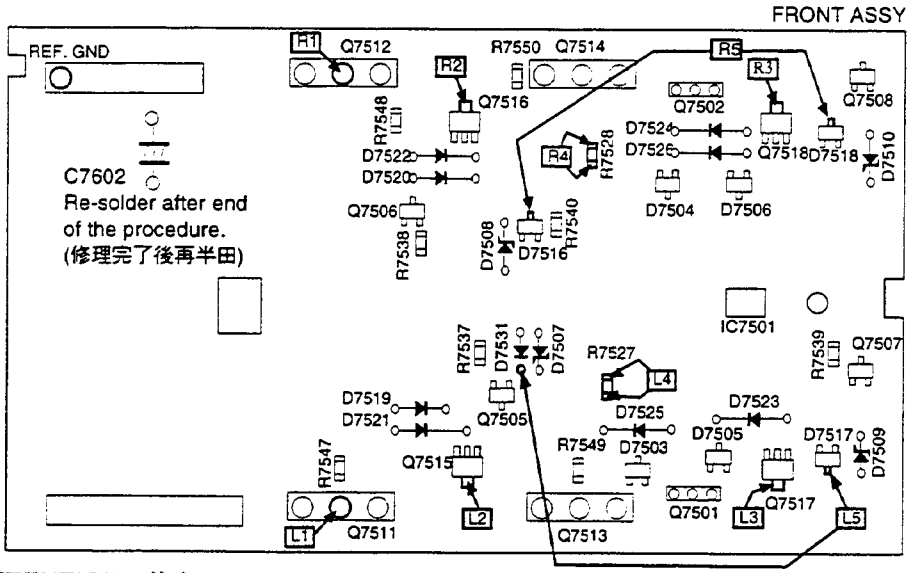




POWER AMP check.
(パワーアンプ部チェック)

CHECK POINT e=emitter, b=base c=collecter	VOLTAGE	DEFECT PART
L ch		
L1(Q7511c-GND) (FAN-Hi)	+B1	D7519, D7521, R7547, Q7511
	- B1	D7523, D7525, R7549, Q7513
L2(Q7515c-GND)	+B1	R7537, Q7505, Q7515
	+B1-1V	D7519
	0V	R7547, D7519
L3(Q7517c-GND)	- B1	R7539, Q7507, Q7517
	- B1+1V	D7525
L4(R7527)	0V	R7549, D7525
L5(D7533-D7517)	0V	D7503, D7505, Q7501
	+13V, 3V	D7507, D7509
	0V	D7517, D7531
R ch		
R1(Q7512c-GND) (FAN-Hi)	+B1	D7520, D7522, R7548, Q7512
	- B1	D7524, D7526, R7550, Q7514
R2(Q7516c-GND)	+B1	R7538, Q7516, Q7506,
	+B1-1V	D7520
	0V	R7548, D7520
R3(Q7518c-GND)	- B1	R7540, Q7508, Q7518
	- B1+1V	D7526
	0V	R7550, D7526
R4(R7528)	0V	D7504, D7506, Q7502
R5(D7516-D7518)	+13V, 3V	D7508, D7510
	0V	D7516, D7518

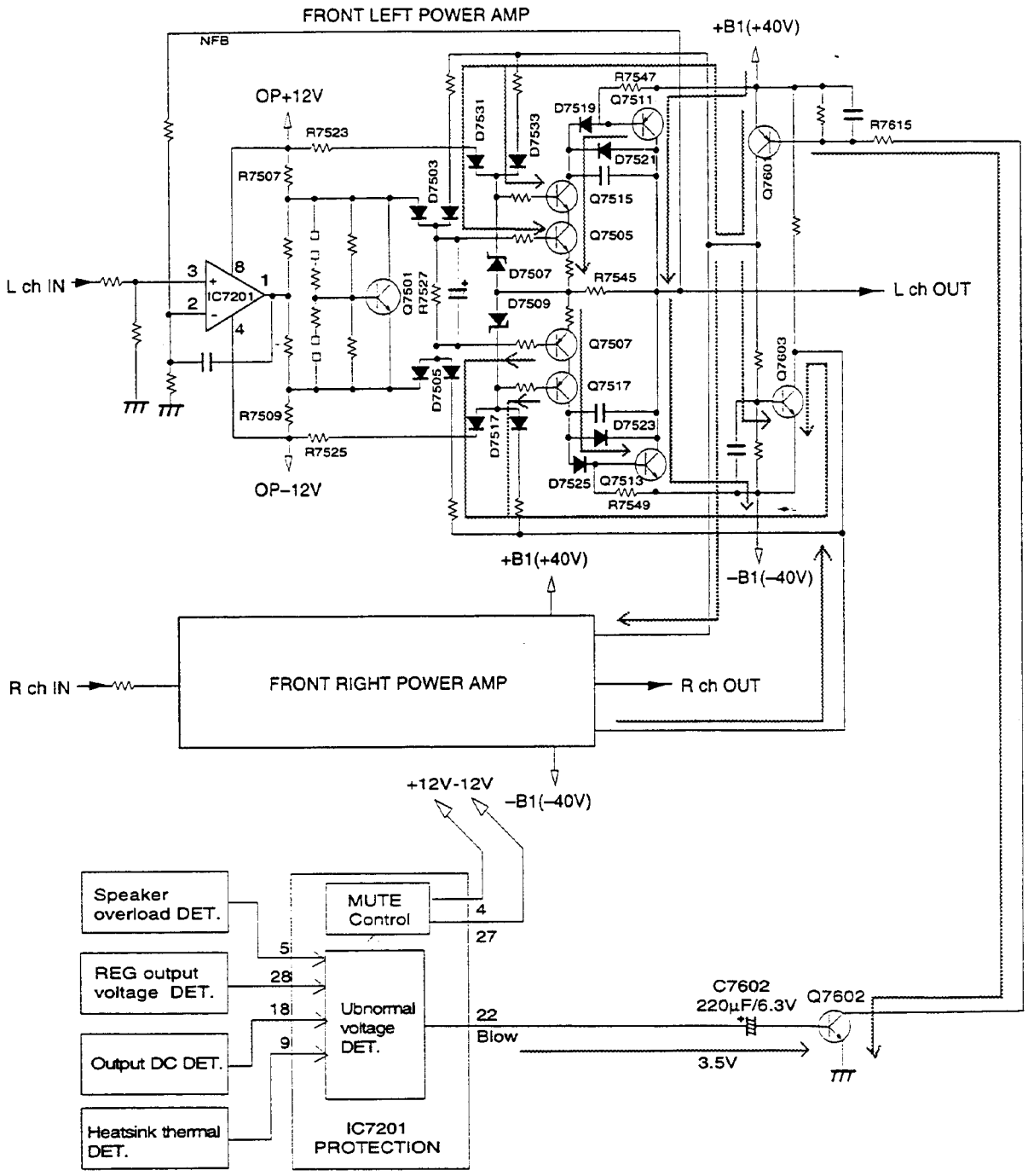
FRONT ASSY



ATTENTION (注意)

Switch on the power after replacing defective parts and confirm blow voltage. If the voltage is 0V re-solder the +lead of C7602 and this is the end of the procedure.
Do not forget to re-solder the lead of C7602.
(部品交換後電源をONにして、ブロー電圧が0Vである事を確認する。 最後に、外したC7602のリード線を半田付けし作業を完了して下さい。 C7602は忘れずにに半田付けして下さい。
半田を外したまま修理を完了すると非常に危険ですので注意して下さい。)

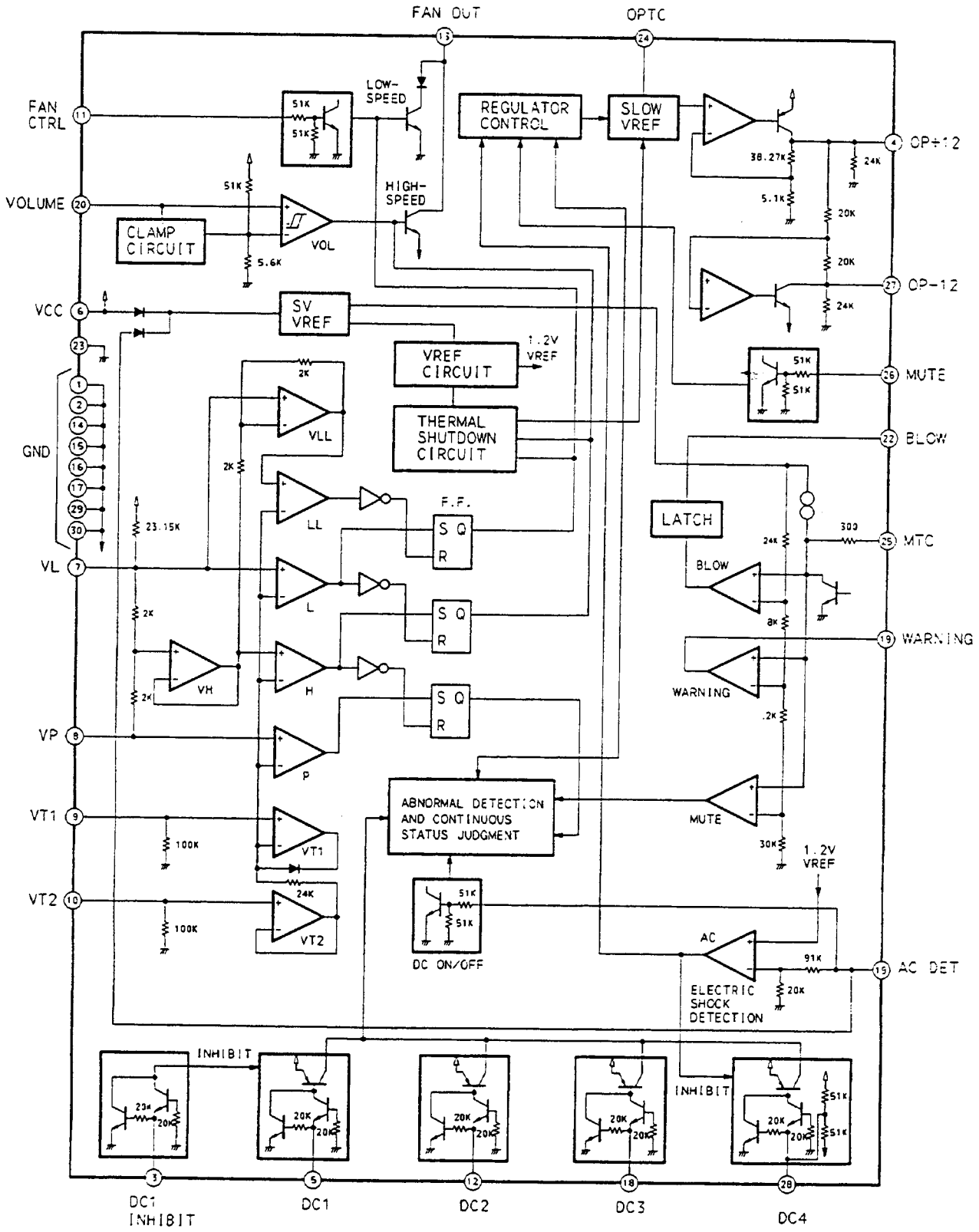
2.3 BLOCK DIAGRAM (FUSE BLOW OPERATION)
(ブロック図) (ヒューズブロー動作時)



This circuit will blow primary fuse by Turning on output transistors when protection circuit have been activated. By this action other parts
may be dameged at the same time. Please check the parts, where current will flow when fuse blow circuit activates, that are shown in the diagram above.
(この回路では保護回路動作時、出力段TrをONすることにより1次側のヒューズを容断します．この際他のパーツが故障することもあります．ヒューズ容断時は上記の電流が流れる部品をあわせて確認下さい．)

2.4 IC BLOCK DIAGRAM
(IC ブロックダイアグラム)

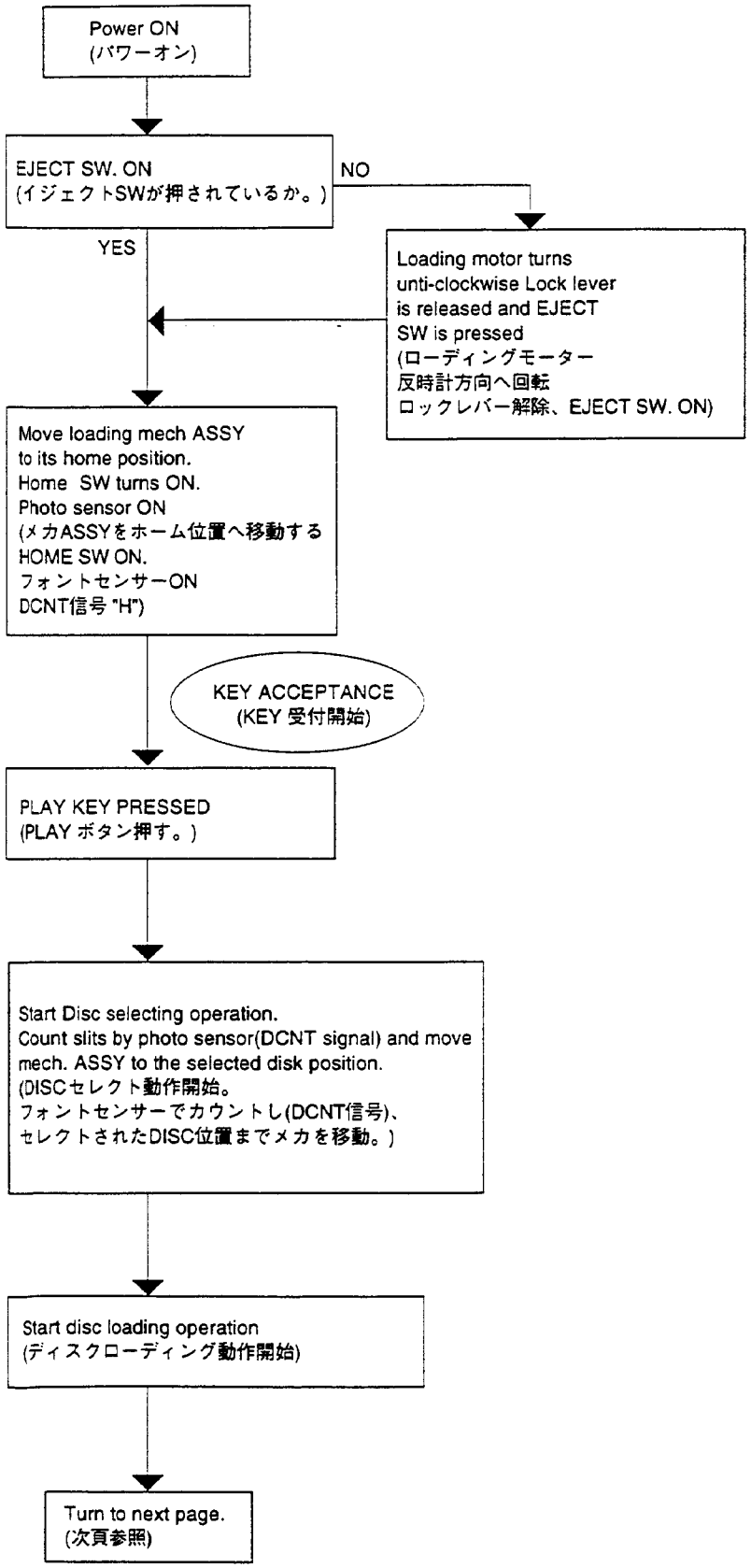
● **PAC006B (IC7201)**

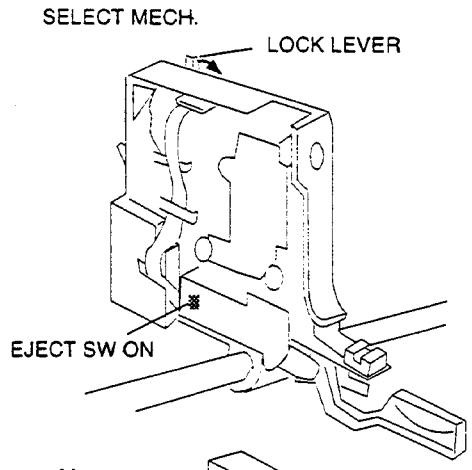


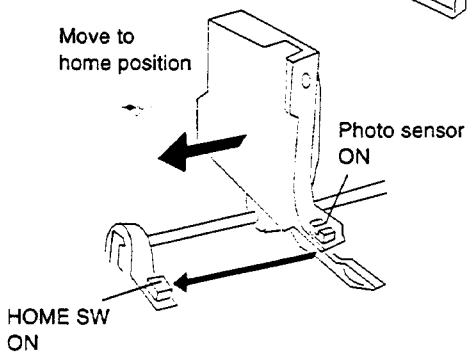
3. FLOW CHART (フローチャート)

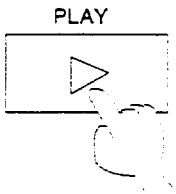
3. 1 GM MECH. ASSY (GM メカASSY)

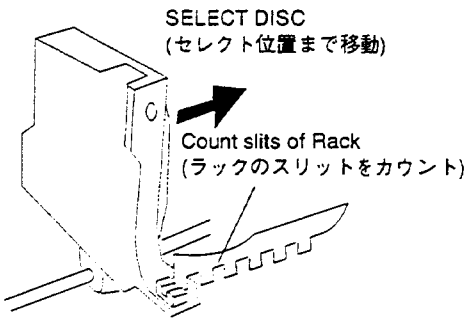
OPERATIONAL FLOW CHART(動作フロー)



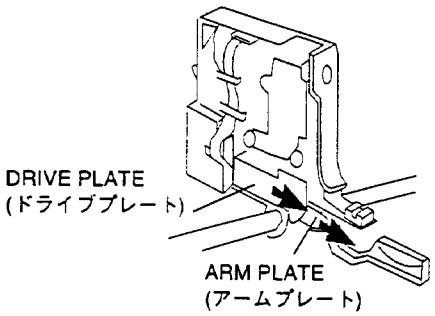




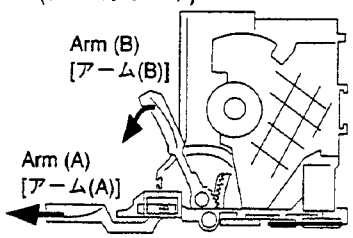




Start disc loading operation
Loading motor starts turning clockwise.
(ディスクローディング動作開始、
ローディングモーター時計方向へ
回転開始。)

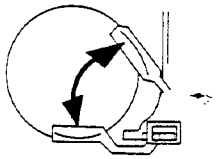


Drive plate & Arm plate start moving forwards.
(ドライブプレート、アームプレート前方へ
移動開始)

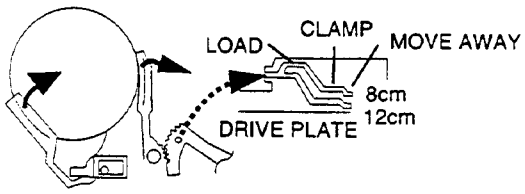


Arm (B) moves to the direction of the arrow
Arm (A), which is connected to Arm plate moves
forwards.
(ドライブプレート上の溝に沿ってアーム(B)が矢印の方向
へ移動アームプレートに連結されたアーム(A)が前方へ移動)

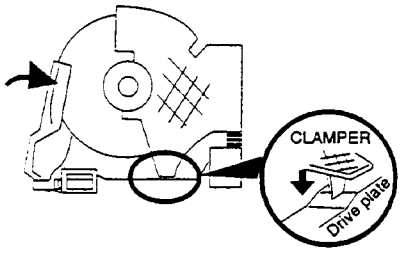
When Arm (B) catches the disc the distance between
Arm (A) and Arm (B) is fixed.
The disc is catched by two arms
(アーム(B)が ディスクに当ると、ディスクの径に応じて
アーム (B)の位置決めがなされる。
ここでディスクがホールドされる)



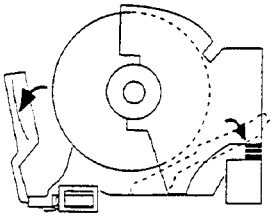
Arm plate & Drive plate moves further on.
The Arm (A) and Arm (B) starts moving upwards holding
the disc between each other
(アームプレート、ドライブプレートが更に前方へ移動
するとアーム (A)の回転軸がローディングベースの一つ目
の窪みに入りアーム (A)が上に上がり始める。
同時にアーム(B)はドライブプレートの溝によって上に
戻り始める。)



Disc is loaded in the mechanism and Arm plate stops.
Drive plate moves further on and Clamper slides
down the slope on the Drive plate and clamps the disc.
(アーム (A)が上がり切ったところでアームプレートが停止、
ドライブプレートは更に前方へ進む。
ドライブプレートの傾斜に沿ってクランパーが下がり
ディスクがクランプされる。)

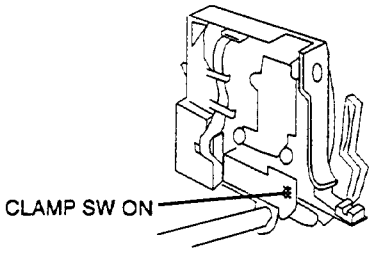


Drive plate moves further on and pushes the Arm (A) to move Arm (A)
away from the disc. Also Arm (B) moves away from the disc due to the
slit on the Drive plate.
(更にドライブプレートが移動し、アーム(A)を押しアーム (A)の回転軸が
ローディングベースの２つめの溝に押し込まれアーム(A)がディスクから
離れる方向に動く、またアーム(B)もドライブプレートの溝によりディス
クから離れる方向へ移動する。)



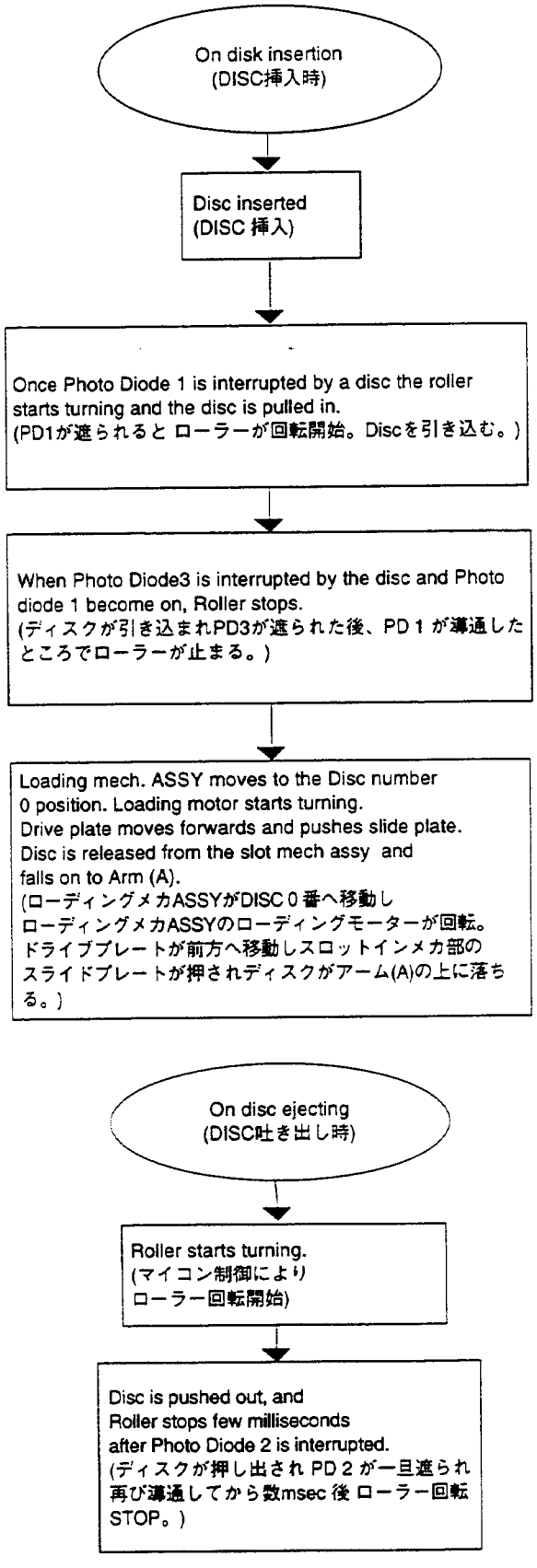
Drive plate moves and turns on CLAMP SW.
(ドライブプレートがCLAMP SWをONする。)

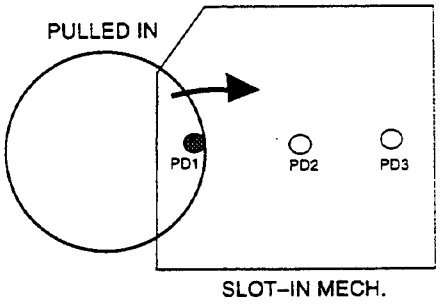
Loading motor stops and Servo
operation starts.
(ローディングモーター回転 STOP
サーボ動作開始。)



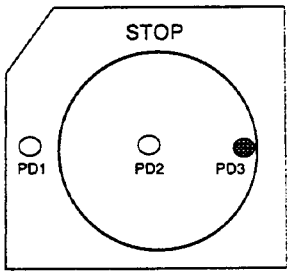
3.2 CD SLOT-IN MECH. (SLOT-IN 部)

OPERATIONAL FLOW CHART (動作フロー)


On disk insertion
(DISC挿入時)
Disc inserted
(DISC 挿入)
Once Photo Diode 1 is interrupted by a disc the roller starts turning and the disc is pulled in.
(PD1が遮られると ローラーが回転開始。Discを引き込む。)
When Photo Diode3 is interrupted by the disc and Photo diode 1 become on, Roller stops.
(ディスクが引き込まれPD3が遮られた後、PD 1 が導通したところでローラーが止まる。)
Loading mech. ASSY moves to the Disc number 0 position. Loading motor starts turning.
Drive plate moves forwards and pushes slide plate.
Disc is released from the slot mech assy and falls on to Arm (A).
(ローディングメカASSYがDISC 0 番へ移動し
ローディングメカASSYのローディングモーターが回転。
ドライブプレートが前方へ移動しスロットインメカ部の
スライドプレートが押されディスクがアーム(A)の上に落ちる。)
On disc ejecting
(DISC吐き出し時)
Roller starts turning.
(マイコン制御により
ローラー回転開始)
Disc is pushed out, and
Roller stops few milliseconds
after Photo Diode 2 is interrupted.
(ディスクが押し出され PD 2 が一旦遮られ再び導通してから数msec 後 ローラー回転 STOP。)



SLOT-IN MECH.

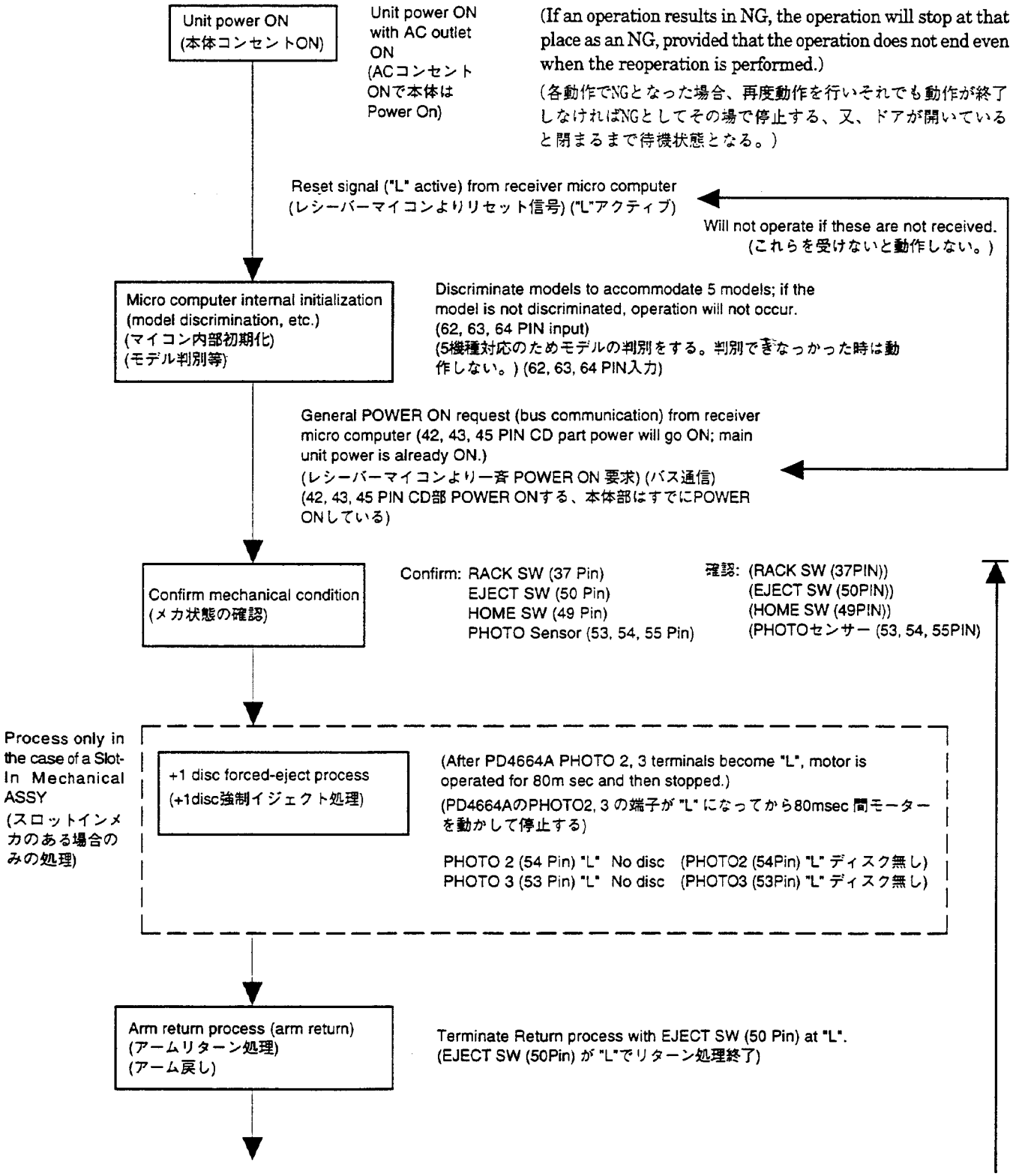


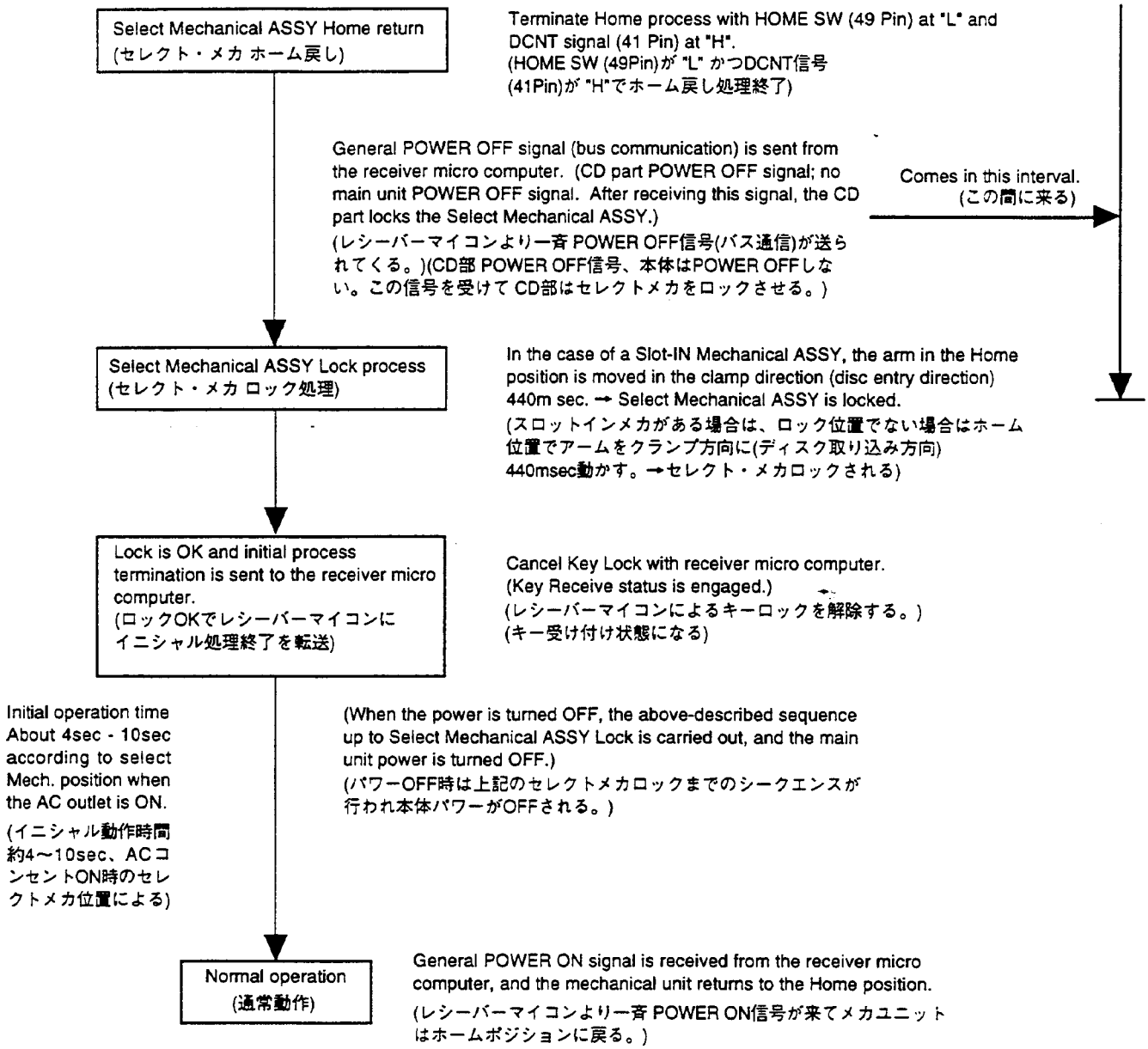
SLOT-IN MECH.

3.3 GM MECH. CD MICRO-COMPUTER (GMメカ CDマイコン)
EX. PD4644A (IC8001: CD ASSY) for XR-P760F

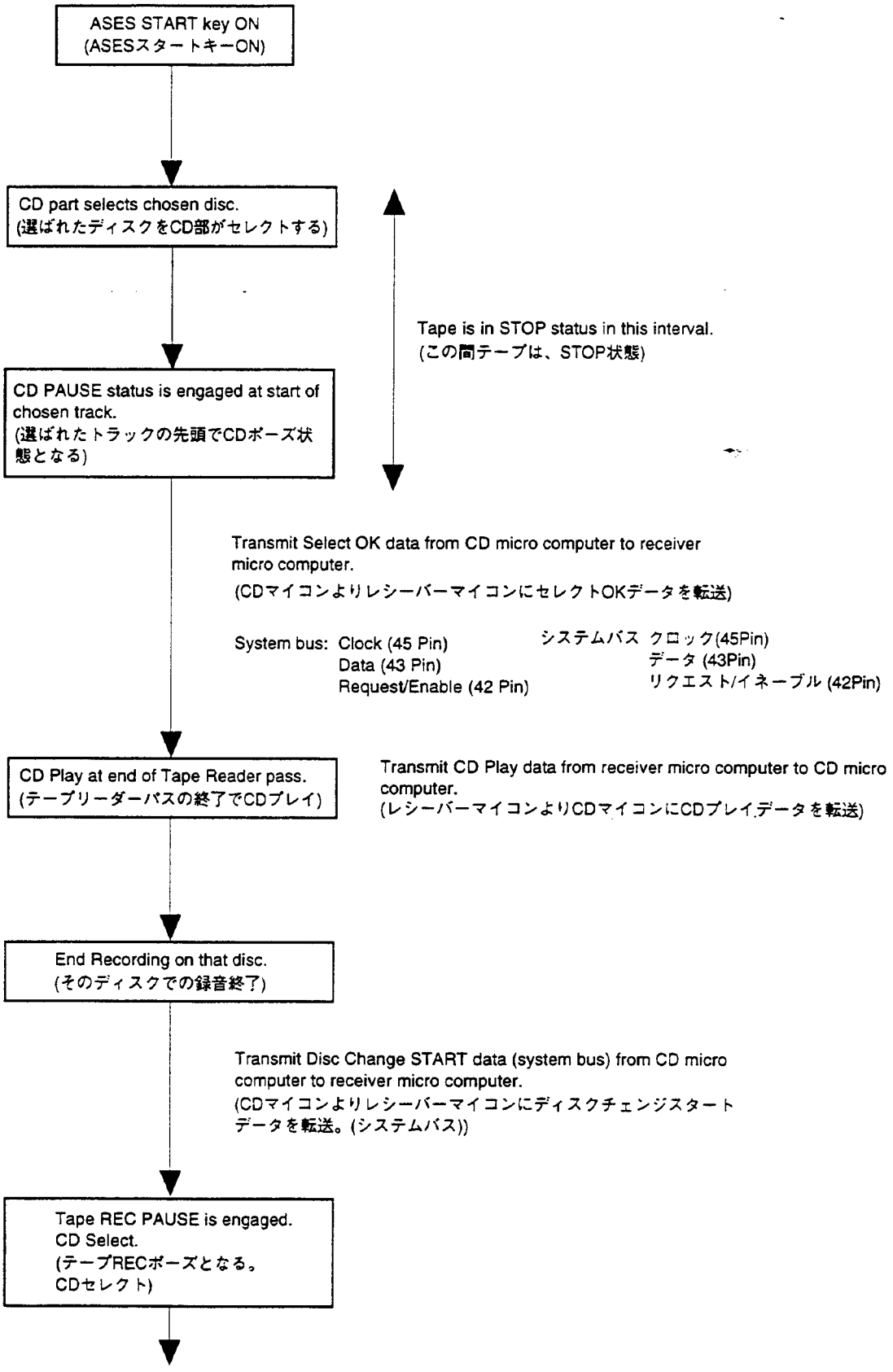
OPERATIONAL FLOW CHART (動作フロー)

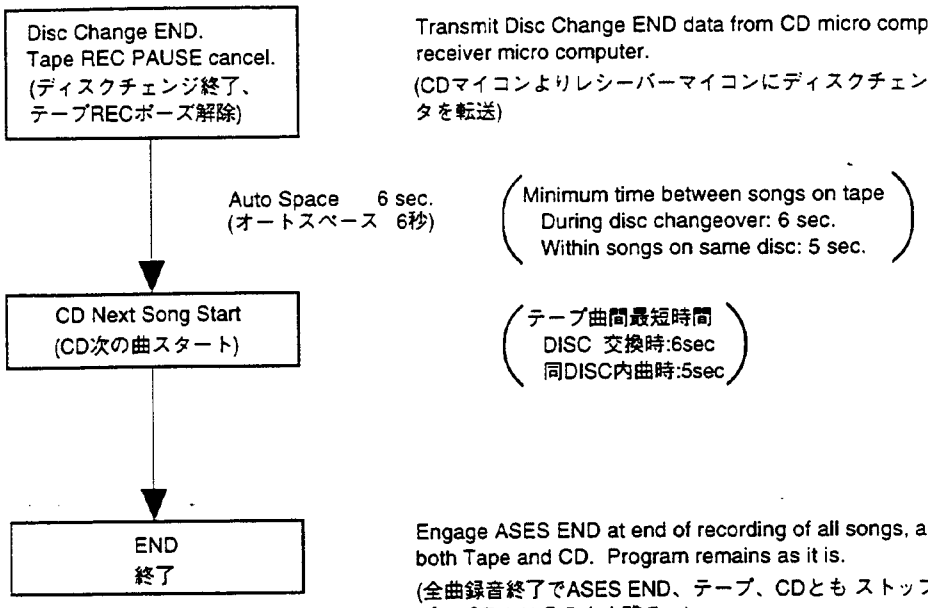
●Sequence when AC outlet is ON (AC コンセントON時のシーケンス)


Unit power ON
(本体コンセントON)
Unit power ON with AC outlet ON
(ACコンセントONで本体はPower On)
(If an operation results in NG, the operation will stop at that place as an NG, provided that the operation does not end even when the reoperation is performed.)
(各動作でNGとなった場合、再度動作を行いそれでも動作が終了しなければNGとしてその場で停止する、又、ドアが開いていると閉まるまで待機状態となる。)
Reset signal ("L" active) from receiver micro computer
(レシーバーマイコンよりリセット信号) ("L"アクティブ)
Will not operate if these are not received.
(これらを受けないと動作しない。)
Micro computer internal initialization
(model discrimination, etc.)
(マイコン内部初期化)
(モデル判別等)
Discriminate models to accommodate 5 models; if the model is not discriminated, operation will not occur.
(62, 63, 64 PIN input)
(5機種対応のためモデルの判別をする。判別できなっかった時は動作しない。) (62, 63, 64 PIN入力)
General POWER ON request (bus communication) from receiver micro computer (42, 43, 45 PIN CD part power will go ON; main unit power is already ON.)
(レシーバーマイコンより一斉 POWER ON 要求) (バス通信)
(42, 43, 45 PIN CD部 POWER ONする、本体部はすでにPOWER ONしている)
Confirm mechanical condition
(メカ状態の確認)
Confirm: RACK SW (37 Pin)
EJECT SW (50 Pin)
HOME SW (49 Pin)
PHOTO Sensor (53, 54, 55 Pin)
確認: (RACK SW (37PIN))
(EJECT SW (50PIN))
(HOME SW (49PIN))
(PHOTOセンサー (53, 54, 55PIN)
Process only in the case of a Slot-In Mechanical ASSY
(スロットインメカのある場合のみの処理)
+1 disc forced-eject process
(+1disc強制イジェクト処理)
(After PD4664A PHOTO 2, 3 terminals become "L", motor is operated for 80m sec and then stopped.)
(PD4664AのPHOTO2, 3 の端子が "L" になってから80msec 間モーターを動かして停止する)
PHOTO 2 (54 Pin) "L" No disc (PHOTO2 (54Pin) "L" ディスク無し)
PHOTO 3 (53 Pin) "L" No disc (PHOTO3 (53Pin) "L" ディスク無し)
Arm return process (arm return)
(アームリターン処理)
(アーム戻し)
Terminate Return process with EJECT SW (50 Pin) at "L".
(EJECT SW (50Pin) が "L"でリターン処理終了)


Select Mechanical ASSY Home return
(セレクト・メカ ホーム戻し)
Terminate Home process with HOME SW (49 Pin) at "L" and DCNT signal (41 Pin) at "H".
(HOME SW (49Pin)が "L" かつDCNT信号 (41Pin)が "H"でホーム戻し処理終了)
General POWER OFF signal (bus communication) is sent from the receiver micro computer. (CD part POWER OFF signal; no main unit POWER OFF signal. After receiving this signal, the CD part locks the Select Mechanical ASSY.)
(レシーバーマイコンより一斉 POWER OFF信号(バス通信)が送られてくる。)(CD部 POWER OFF信号、本体はPOWER OFFしない。この信号を受けて CD部はセレクトメカをロックさせる。)
Comes in this interval.
(この間に来る)
Select Mechanical ASSY Lock process
(セレクト・メカ ロック処理)
In the case of a Slot-IN Mechanical ASSY, the arm in the Home position is moved in the clamp direction (disc entry direction) 440m sec. → Select Mechanical ASSY is locked.
(スロットインメカがある場合は、ロック位置でない場合はホーム位置でアームをクランプ方向に(ディスク取り込み方向) 440msec動かす。→セレクト・メカロックされる)
Lock is OK and initial process termination is sent to the receiver micro computer.
(ロックOKでレシーバーマイコンに イニシャル処理終了を転送)
Cancel Key Lock with receiver micro computer.
(Key Receive status is engaged.)
(レシーバーマイコンによるキーロックを解除する。)
(キー受け付け状態になる)
Initial operation time About 4sec - 10sec according to select Mech. position when the AC outlet is ON.
(イニシャル動作時間 約4〜10sec、ACコンセントON時のセレクトメカ位置による)
(When the power is turned OFF, the above-described sequence up to Select Mechanical ASSY Lock is carried out, and the main unit power is turned OFF.)
(パワーOFF時は上記のセレクトメカロックまでのシークエンスが行われ本体パワーがOFFされる。)
Normal operation
(通常動作)
General POWER ON signal is received from the receiver micro computer, and the mechanical unit returns to the Home position.
(レシーバーマイコンより一斉 POWER ON信号が来てメカユニットはホームポジションに戻る。)

● Sequence during Program ASES (Program is incorporated and sequence starts from CD STOP status)
(● プログラムASESの時のシーケンス) (プログラムが組まれていてCD ストップ状態からのシーケンス)

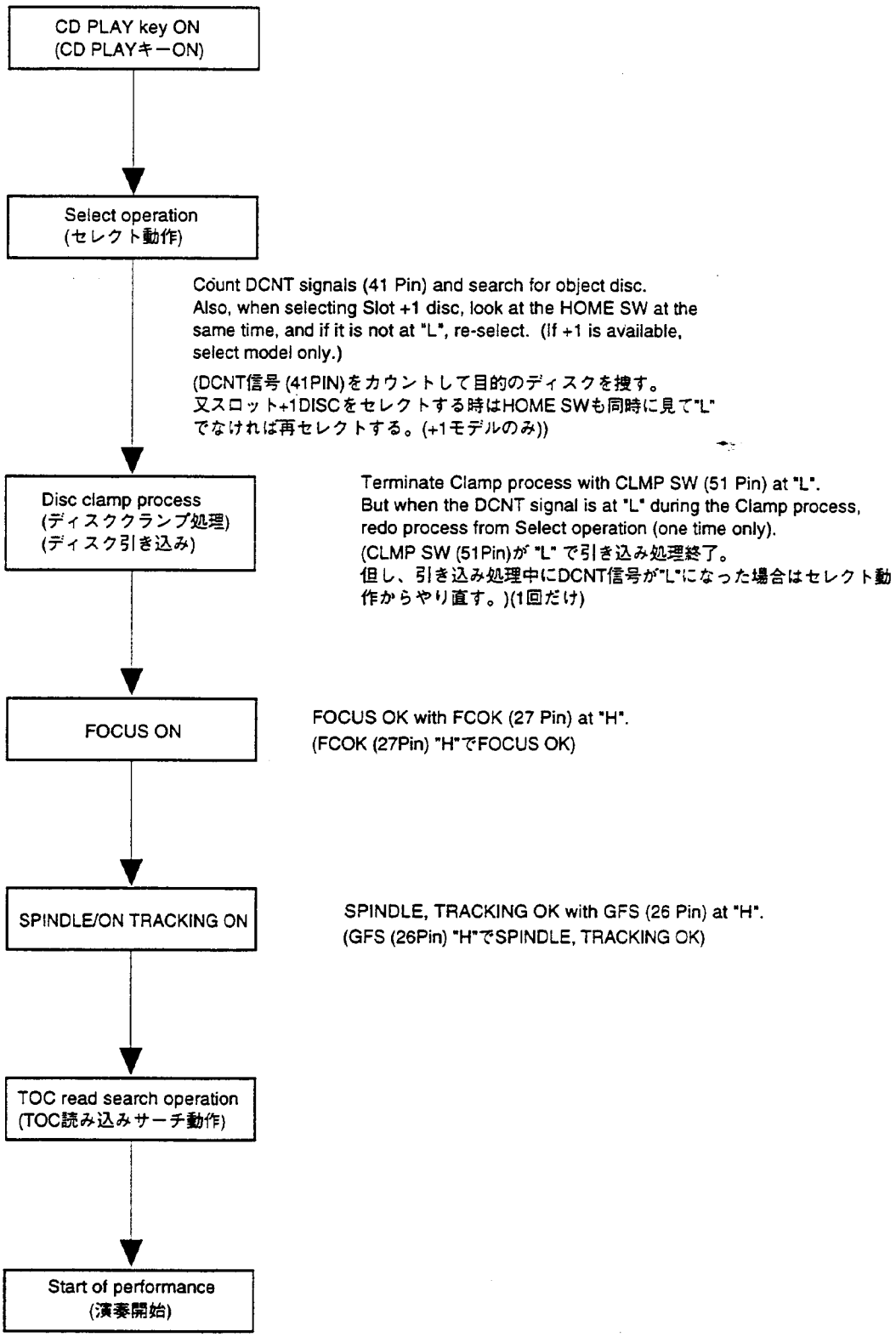

ASES START key ON
(ASESスタートキーON)
CD part selects chosen disc.
(選ばれたディスクをCD部がセレクトする)
CD PAUSE status is engaged at start of chosen track.
(選ばれたトラックの先頭でCDポーズ状態となる)
Tape is in STOP status in this interval.
(この間テープは、STOP状態)
Transmit Select OK data from CD micro computer to receiver micro computer.
(CDマイコンよりレシーバーマイコンにセレクトOKデータを転送)
System bus: Clock (45 Pin)
Data (43 Pin)
Request/Enable (42 Pin)
システムバス クロック(45Pin)
データ (43Pin)
リクエスト/イネーブル (42Pin)
CD Play at end of Tape Reader pass.
(テープリーダーパスの終了でCDプレイ)
Transmit CD Play data from receiver micro computer to CD micro computer.
(レシーバーマイコンよりCDマイコンにCDプレイデータを転送)
End Recording on that disc.
(そのディスクでの録音終了)
Transmit Disc Change START data (system bus) from CD micro computer to receiver micro computer.
(CDマイコンよりレシーバーマイコンにディスクチェンジスタートデータを転送。(システムバス))
Tape REC PAUSE is engaged.
CD Select.
(テープRECポーズとなる。
CDセレクト)


Disc Change END.
Tape REC PAUSE cancel.
(ディスクチェンジ終了、
テープRECポーズ解除)
Transmit Disc Change END data from CD micro computer to receiver micro computer.
(CDマイコンよりレシーバーマイコンにディスクチェンジ終了データを転送)
Auto Space 6 sec.
(オートスペース 6秒)
Minimum time between songs on tape
During disc changeover: 6 sec.
Within songs on same disc: 5 sec.
CD Next Song Start
(CD次の曲スタート)
テープ曲間最短時間
DISC 交換時:6sec
同DISC内曲時:5sec
END
終了
Engage ASES END at end of recording of all songs, and stop both Tape and CD. Program remains as it is.
(全曲録音終了でASES END、テープ、CDとも ストップする。
プログラムはそのまま残る。)

Reference DISC changeover time
From DISC STOP of 1st disc to DISC PLAY of 2nd disc: about 6 sec.
From DISC STOP of 1st disc to DISC PLAY of 25th disc: about 10 sec.

(参考 DISC交換時間
1枚目DISC STOPから2枚目DISC PLAYまで:約6sec
1枚目DISC STOPから25枚目DISC PLAYまで:約10sec)

● Sequence during PLAY operation (from Mechanical ASSY Home standby at CD function)
(● PLAY操作時のシーケンス) (ファンクションCDでメカ・ホーム待機中から)


CD PLAY key ON
(CD PLAYキーON)
Select operation
(セレクト動作)
Count DCNT signals (41 Pin) and search for object disc.
Also, when selecting Slot +1 disc, look at the HOME SW at the same time, and if it is not at "L", re-select. (If +1 is available, select model only.)
(DCNT信号 (41PIN)をカウントして目的のディスクを捜す。
又スロット+1DISCをセレクトする時はHOME SWも同時に見て"L"でなければ再セレクトする。(+1モデルのみ))
Disc clamp process
(ディスククランプ処理)
(ディスク引き込み)
Terminate Clamp process with CLMP SW (51 Pin) at "L".
But when the DCNT signal is at "L" during the Clamp process, redo process from Select operation (one time only).
(CLMP SW (51Pin)が "L" で引き込み処理終了。
但し、引き込み処理中にDCNT信号が"L"になった場合はセレクト動作からやり直す。)(1回だけ)
FOCUS ON
FOCUS OK with FCOK (27 Pin) at "H".
(FCOK (27Pin) "H"でFOCUS OK)
SPINDLE/ON TRACKING ON
SPINDLE, TRACKING OK with GFS (26 Pin) at "H".
(GFS (26Pin) "H"でSPINDLE, TRACKING OK)
TOC read search operation
(TOC読み込みサーチ動作)
Start of performance
(演奏開始)

3.4 IC INFORMATION (IC情報)

Pin No.	Symbol	Name	I/O	Description	Remarks
1	P94/FIP6	G6	O	FL drive DIGIT output (FL 駆動用DIGIT出力)	Outputs "L"
2	P93/FIP5	G5	O		
3	P92/FIP4	GRID G4	O		
4	P91/FIP3	G3	O		
5	P90/FIP2	G2	O		
6	P81/FIP1	G1	O		
7	P80/FIP0	GØ	O		
8	Vdd	+5V	—		
9	P27	DISP CLK	O	Clock output for display data transmission (表示データー送信用クロック)	
10	P26	DISP DATA	O	Data output for display	
11	P25	MUTE	O	Muting control output	"H" MUTE
12	P24	¯XRST	O	Reset for LSI	"⌐¬": Reset
13	P23	¯XLAT	O	LSI control data latch pulse	"⌐¬": Latch
14	SCK1	CD CLK	O	LSI serial clock output	Serial clock for LSI
15	SO1	CD DATA	O	LSI control data serial output	LSI control data
16	SI1	SQSO	I	Subcode Q-data serial input	Subcode data input
17	RESET	¯RST	I	CPU reset	CPU reset "⌐¬"
18	P74	¯LD ON	O	Laser diode control output	"L": ON ; "H": OFF
19	P73	¯XTAL ON/OFF	O	LSI oscillation control output	"L": oscillation ; "H": Stop
20	AVss	GND	—		
21	P17	CD-G CE	O	CD-G control latch pulse	Outputs "L" with models that have no CD-G (CD-Gのないモデルでは "L"を出力する)
22	P16	CD-G MUTE	O	CD-G muting output	
23	P15	(CD-G RST)	O	Unused	
24	P14	(CD-GNTSC)	O	Unused	
25	P13	SENS	I	LSI operating status multi-mode input (LSI動作状態多モード入力)	
26	P12	GFS	I	Frame synchronizing Lock input (フレームシンクロック入力)	"H" GFS OK
27	P11	FCOK	I	Focus OK input	"H" FOCUS OK
28	P10	POWER ON	O	NC	LSI power ON/OFF (Unused)
29	AVdd	+5V	—		
30	AVref	GND	—		

Pin No.	Symbol	Name	I/O	Description	Remarks
31	P04	INSD	I	Slider INSIDE SW input	"L" INSD SW ON
32	XT2	Open	—		
33	Vss	GND	—		
34	X1	Main system	—		
35	X2	Clock (4.19M)	—		
36	P37	TEST	I		"H" TEST
37	P36	¯DOOR CLOSE	I	RACK SW input	"L" Close completed
38	P35	¯DOOR OPEN	I	Pull Up except for motorized door (電動ドア以外はプルアップ)	"L" Open completed (Unused)
39	P34	DSLT	O	Select motor output	Select motor Output
40	P33	DSRT	O		
41	P32	DCNT	I	Disc count pulse input	Disc count pulse
42	P31	SB REQ/ENA	I/O	System bus communication Request/Enable	System bus Request or Enable
43	P30	SB DATA	I/O	System bus communication data input/output	System bus data IN/OUT
44	INTP3	SCOR	I	Subcode synchronizing input	¯▼_ : Subcode synch
45	INTP2	SB CLK	I	System bus communication clock input	_▲¯, ¯▼_ : System bus clock
46	INTP1	STBYRELE	I	CPU Stop mode cancel pulse	¯▼_ : Micro computer Standby mode cancel input
47	INTP0	RMDT	I	Remote control data input	¯▼_ :Remote control data
48	IC(VPP)	GND	—		
49	P72	¯HOME	I	Disc select HOME SW input	"L": Mechanical HOME position
50	P71	¯EJECT	I	Loading out SW input	"L": Eject completed
51	P70	¯CLMP	I	Clamp completion SW input	"L": Clamping completed
52	Vdd	+5V	—		
53	P127	P1S3	I	Slot part photo sensor input (Pull Up with models where Slot Mechanical ASSY+1 is not loaded) (+1のない機種はプルアップ)	+1 part photo sensor input
54	P126	P1S2	I		
55	P125	P1S1	I		
56	P124	IN1	O	Output for +1 Eject /Load (Output "L" for models where Slot Mechanical ASSY +1 is not loaded. Set to NC) (+1のない機種は出力 "L" です。NC)	Output for +1 Eject / Load
57	P123	OUT1	O		
58	P122	L IN	O	Loading mechanical output	Loading mechanical output
59	P121	L OUT	O		
60	P120	DOOR IN	O	Output "L" for models without motorized door. Set to NC (電動ドアでない機種は出力 "L" です。NC)	Motorized door output (Unused)
61	P117	DOOR OUT	O		

Pin No.	Symbol	Name	I/O	Description	Remarks
62	P116	KD2	I	Model discrimination input	Key data input
63	P115	KD1	I		
64	P114	KD0	I		
65	P113	(LED RACK)	O	NC	"L" output (Unused)
66	P112/FIP20	S10	O	FL drive SEG output (FL 駆動用 SEG 出力)	SEG for sending Outputs "L" with XR-P260F, XR-P560F, XR-P760F. Set to NC. (XR-P260F, XR-P560F, XR-760F では "L" を出力。NC)
67	P111/FIP19	S8	O		
68	P110/FIP18	SEG S0	O		
69	P107/FIP17	S1	O		
70	P106/FIP16	S5	O		
71	Vload		—	GND or FLAC	Set to GND with XR-P260F, XR-P560F, XR-P760F and to FLAC with PD-Q160F, PD-F25
72	P105/FIP15	S6	O		
73	P104/FIP14	S7	O		
74	P103/FIP13	S2	O		
75	P102/FIP12	S3	O		
76	P101/FIP11	S4	O		
77	P100/FIP10	S9	O		
78	P97/FIP9	LED STYB	O	Stand by LED output (PD-F25 only)	LED standby
79	P96/FIP8	LED RED	O	Selector LED output	LED red "H" is illuminated.
80	P95/FIP7	LED GR	O		LED green "H" is illuminated.

Selector output and operation
(セレクター出力、動作)

PIN		STOP	Send right	Send left
39	DSLT	L	L	H
40	DSRT	L	H	L

+1 Eject/Load
(+1 イジェクト / ロード)

PIN		STOP	Eject	Loading
56	IN1	L	L	H
57	OUT1	L	H	L

Loading mechanical output
(ローディングメカ出力)

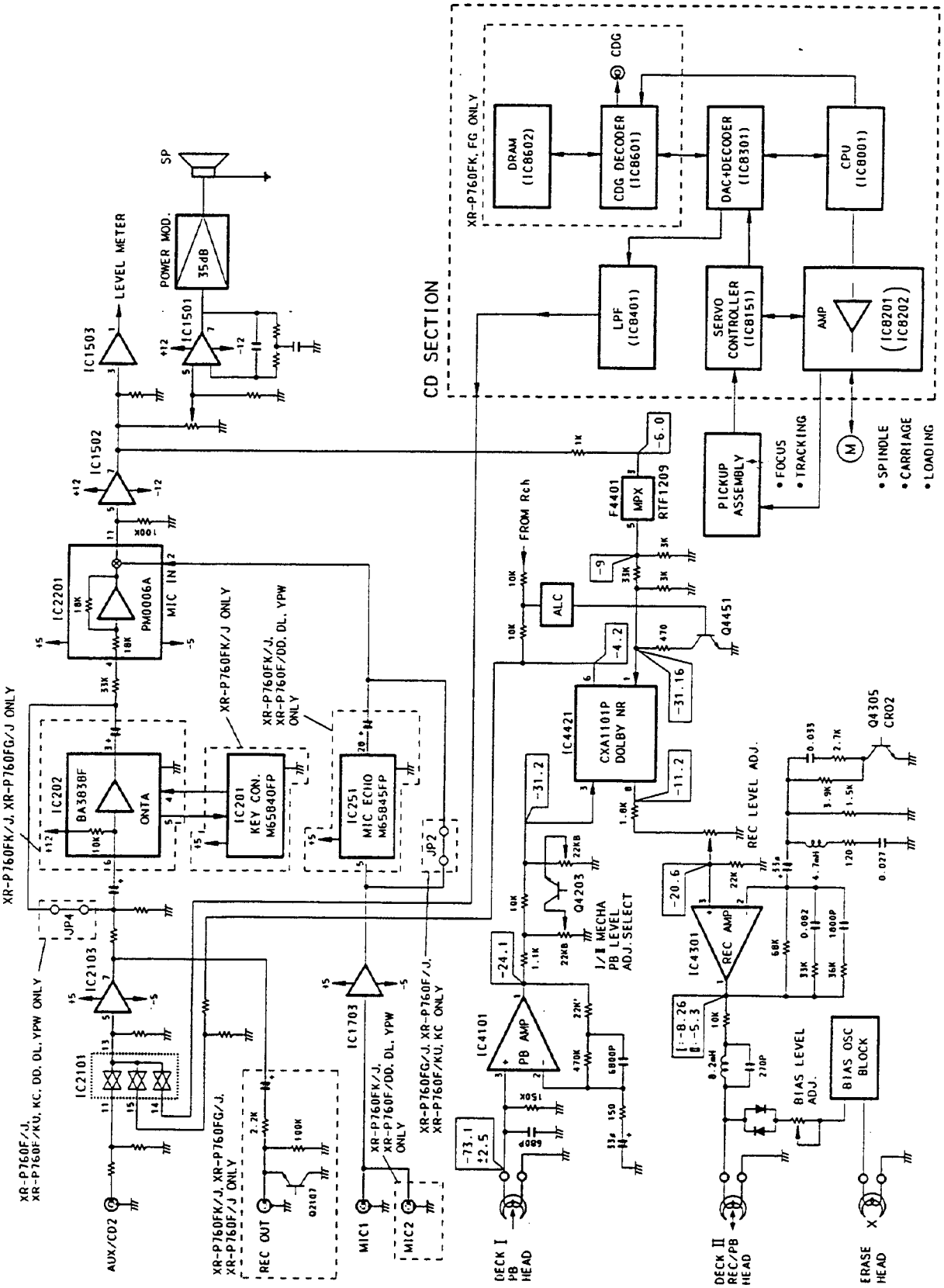
PIN		STOP	Clamp	Return
58	LIN	L	L	H
59	LOUT	L	H	L

Note: The port output contents change with switching of the model discription terminal (pins 62-64) in the following table.

(注意：下表のモデル判別用端子(62-64 pin) の切換えでポート出力内容が変わります。)

PIN		PD-Q160F	PD-F25	XR-P260F	XR-P560F	XR-P760F	XR-P760F/J
64	KD0	H	H	L	H	L	L
63	KD1	H	H	H	L	L	H
62	KD2	H	L	H	H	H	L

4. BLOCK DIAGRAM (ブロックダイアグラム)



PIONEER
The Art of Entertainment

4/73

Service Manual

ORDER NO.
CRT1574

CD MECHANISM MODULE

CX-540

- **This service manual describes operation of the CD mechanism incroporated in models listed in the table below.**
- **When performing repairs use this manual together with the specific manual for model under repair.**

Model	Service Manual	CD Mechanism Module	CD Mechanism Unit
DEH-605RDS/EW,X1B/EW	CRT1563	CXK2810	CXA6475
DEH-505SDK/GR			
DEH-505/EW,X1B/EW			
DEH-405SDK/GR			
DEH-505/UC	CRT1570	CXK2800	CXA5970
DEH-503/ES			
DEH-45/UC			
DEH-405/UC			
DEH-305/US			
DEH-303/ES			
DEH-205/UC			
DEH-203/ES			

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4/73

1. CIRCUIT DESCRIPTION

1.1 PRE-AMPLIFIER STAGE (IC1001 UPC2571GS)

The optical signals are converted to voltage signals using an i/v amplifier inside the PU unit.

These voltage signals (A - F) are further processed by this pre-amp stage.

The pre-amplifier performs the following tasks

> Automatic power control of the PU unit's laser diode.

> Generation of an equalized RF signal from the photo-detector outputs (A - D).

> Generation of a focus error signal from the photo-detector outputs (A - D).

> Generation of a tracking error signal from the photo-detector outputs (E & F).

> Generation of a tracking zero crossing signal from the photo-detector outputs (E & F).

This IC runs from a single voltage supply (+5V). The reference voltage for this IC, the PU unit, and all the servo circuitry is REFO. This is obtained from pin 19 of the pre-amp ; which in turn is derived from the output REFOUT of the servo LSI, IC1201, UPD63700GF. The voltages REFOUT and REFO should be at +2.5V DC with respect to GND. All measurements and observations should be made using REFO as the reference as this is a buffered output. Care should be taken not to inadvertently short REFO to GND.

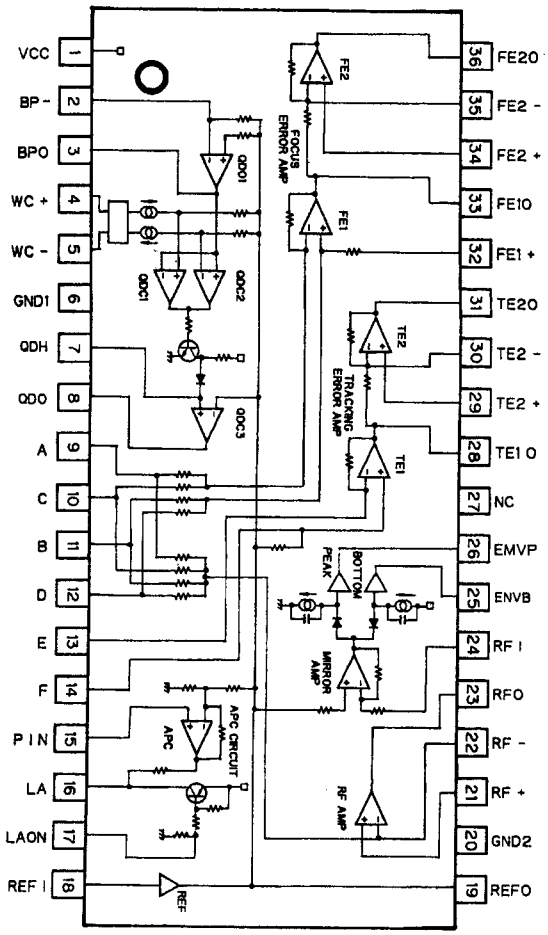


Fig.1 : UPC2571GS BLOCK DIAGRAM

1) Automatic Power Control (APC)

The laser diode's junction voltage varies greatly with temperature ; causing large output variations in optical power. To avoid this, a monitor diode is used in a feedback circuit to keep the optical power constant. As two different manufacturer's laser diodes are used the LD current falls into two broad bands : approx. 40mA and approx. 60mA.

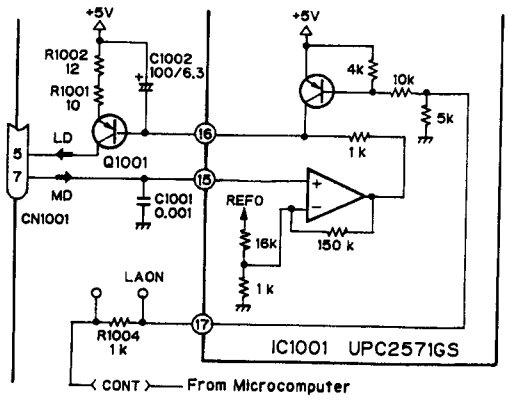


Fig.2 : APC CIRCUIT

2) RF Amplifier

This performs a simple summation of the photo-detector outputs A,B,C & D, amplifies, and equalizes to produce the RF signal at RFO. The RF eye pattern may be monitored here. The RFO OFFSET volume is used to ensure that the RFO waveform has the correct offset relative to the FOK threshold level inside the servo LSI UPD63700GF. The FOK signal is used in the focus close sequence, and during play to control the defect circuit inside the UPD63700GF.

The AC coupled RFO signal, RFI, is used by the UPD63700GF to generate the EFM signal which is used in turn by the DSP spindle CLV control sections.

For low frequency signals :

VRFO = (A+B+C+D) x (R1018+R1019)/10k = (A+B+C+D) x 6.22

The RFO waveform should have an amplitude of approx. 1.9Vpp, with it's upper envelope at +1.1V DC w.r.t. REFO.

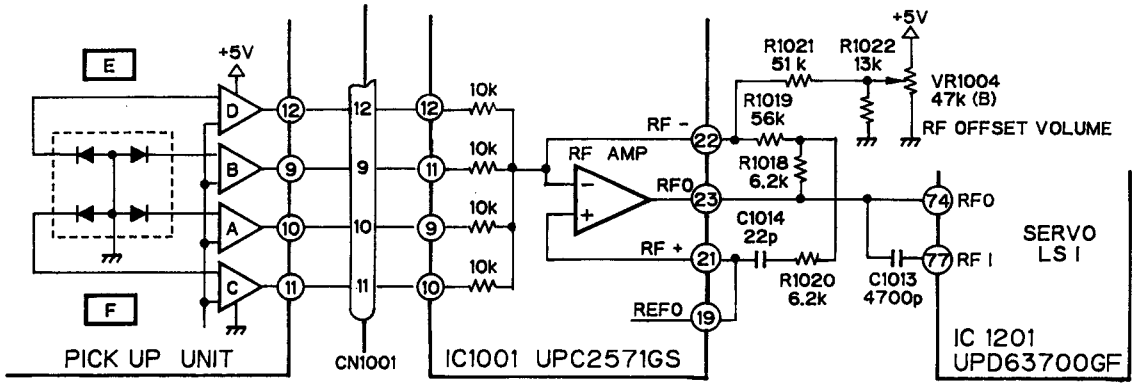


Fig.3 : RFO AMPLIFIER

3) Focus Error Amplifier

This produces a focus error signal used as the basis for the focus servo.

VFEY = ((A+C)-(B+D)) x 5 x (R1007//20k)/10k

= FE x 6.23 (FE = PU unit focus error)

The S-Curve at FEY should have an amplitude of approx. 1.9Vpp.

The second amplifier stage is also a low pass filter, fc=11kHz, and has a bias volume adjustment. This adjustment is used to vary the reference bias level of the focus servo loop and is adjusted to obtain an optimum eye pattern at RFO.

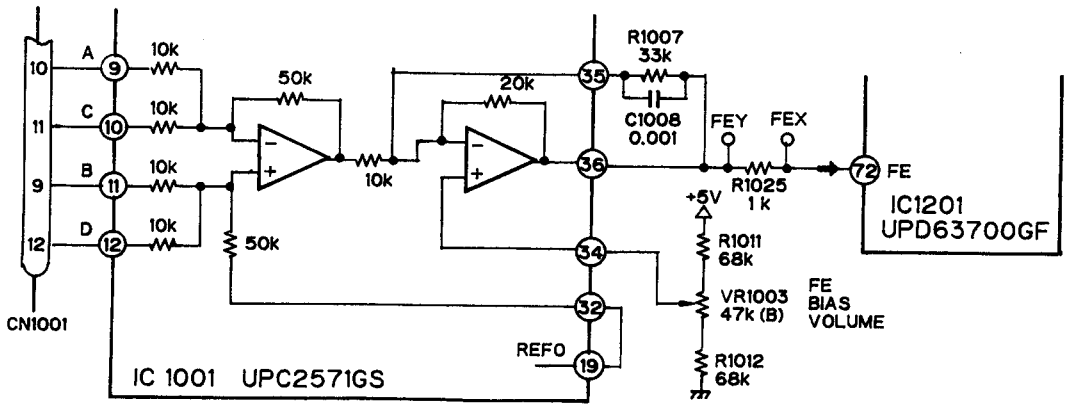


Fig.4 : FOCUS ERROR AMPLIFIER

4) Tracking Error Amplifier

This produces the tracking error signal used in the tracking servo loop.

VTEY = (25 x E) - (25 x F x 2 x 10k / (T.BAL+10k))

Normally, the sensitivity of E & F are the same and T.BAL=10k

=> VTEY = 25 x (E-F)

If, however, the E and F sensitivities are different the T.BAL volume can be used to cancel out the unbalance. The offset adjustment TE OFFSET is to cancel any DC offsets from the photo-detectors or op-amps to ensure the reference bias for the servo loop is at zero. Maladjustment of either of these pre-sets will result in poor tracking performance and susceptibility to skipping.

For a typical unit, the TEY level should be approx. 1.8 Vpp.

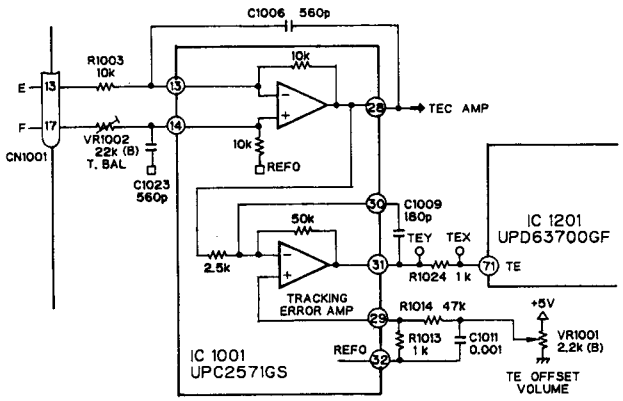


Fig.5 : TRACKING ERROR AMPLIFIER

5) Tracking Zero Crossing Amplifier

TEC1 is basically an amplified, AC coupled, version of the TEY waveform. It is used by the servo LSI IC1201, UPD63700GF to located the zero crossing points of the TEY signal to :

1) Determine how many tracks have been crossed during track jumping or a carriage move operation.
2) Determine in which direction the lens is moving when attempting to close tracking. This is used in the "tracking brake" circuit described later.

For signals in the range 500Hz - 5kHz :

VTEC1 = R1005/R1006 x (E-F) = 45.5 x (E-F)

Typically TEC1 is around 4.2Vpp, this means that the TEC1 signal level may be greater than the saturation limit of the op-amp and the signal will clip. However, since the servo LSI only uses the zero-crossing points, this is not critical.

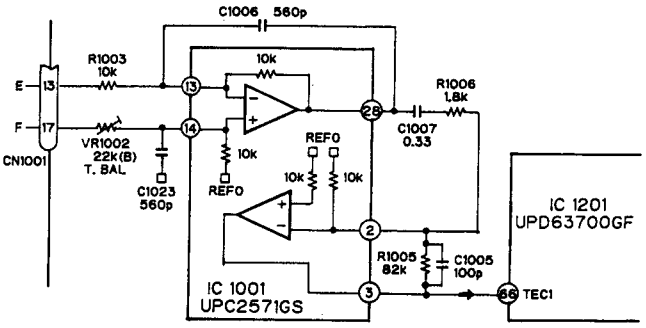


Fig.6 : TRACKING ZERO CROSSING AMPLIFIER

1.2 SERVO STAGE (UPD63700GF)

All the servo equalization & sequencing, such as focus closing, track jumping, carriage moving etc. are performed in this LSI, as well as all the DSP functions : data decoding, error protection, interpolation etc. The signals FE & TE are digitized and processed by the servo block to produce the focus, tracking & carriage drive signals, in a PWM format.

The RFI signal is converted to the EFM signal which is decoded by the DSP block to produce an audio signal ; during this process, a spindle servo error signal is also generated and used by the servo block to produce a spindle drive signal, again in PWM form.
The PWM waveforms are filtered, to remove the PWM carrier, amplified by the driver IC1301 PA3026, and output to the corresponding actuators.

1) Focus Servo System

The main focus equalization takes place inside the UPD63700GF (figure 7). The equalizer response can be measured between FEX and FIN and has the shape shown in figure 8.

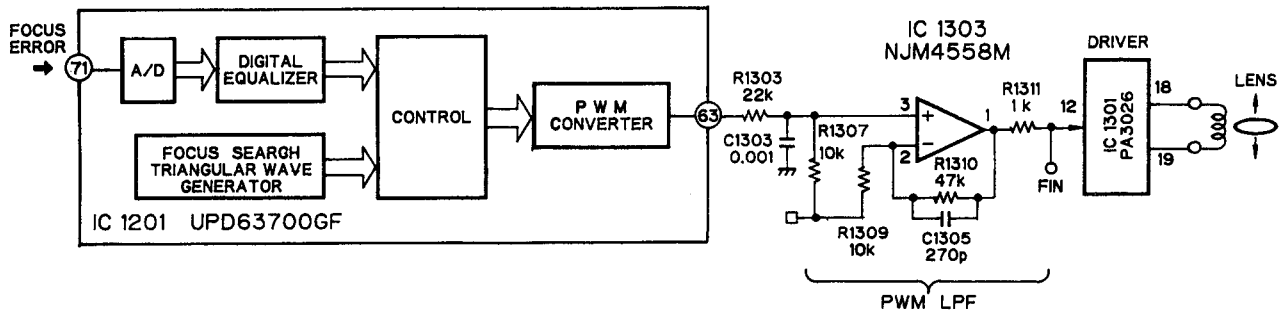


Fig.7 : FOCUS SERVO BLOCK DIAGRAM

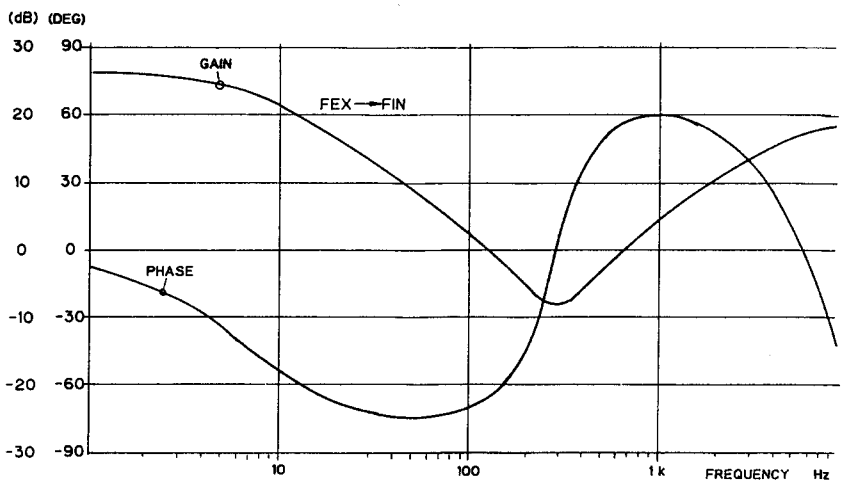


Fig.8 : FOCUS EQUALIZER

In order to smoothly close focus the lens must first be within approx. 5μm of the "just focused" position. This position is achieved by a focus search sequence. The lens is moved up and down using a triangular wave search voltage while the spindle motor is kicked and kept rotating at an appropriate speed. The servo LSI monitors the FE and RFO signals and, at an appropriate point, automatically closes focus.

The conditions for focus close are :

1) The lens is moving from a far to a near position relative to the disc,
2) FOK = HIGH (5V),
3) FZD (IC internal signal) was latched high and
4) FE = 0 (w.r.t. REFO).

When the focus servo closes, the servo LSI's serial data output port, XSO, will show a high-low transition. This is received by the microcomputer as an indication that the servo loop was closed and after about 25mS it begins monitoring the FOK output, via a LPF, to verify that focus is still closed ; in the event of FOK becoming low for an appreciable time, the microcomputer will take appropriate action.

The various signal levels which contribute to focus close are shown in figure 9, which shows the case where focus close has been inhibited.

In TEST MODE, using FOCUS CLOSE MODE 1, conditions 2 & 3 can be inhibited to allow the S-Curve, focus search voltage and the actual lens movement to be observed at ease.

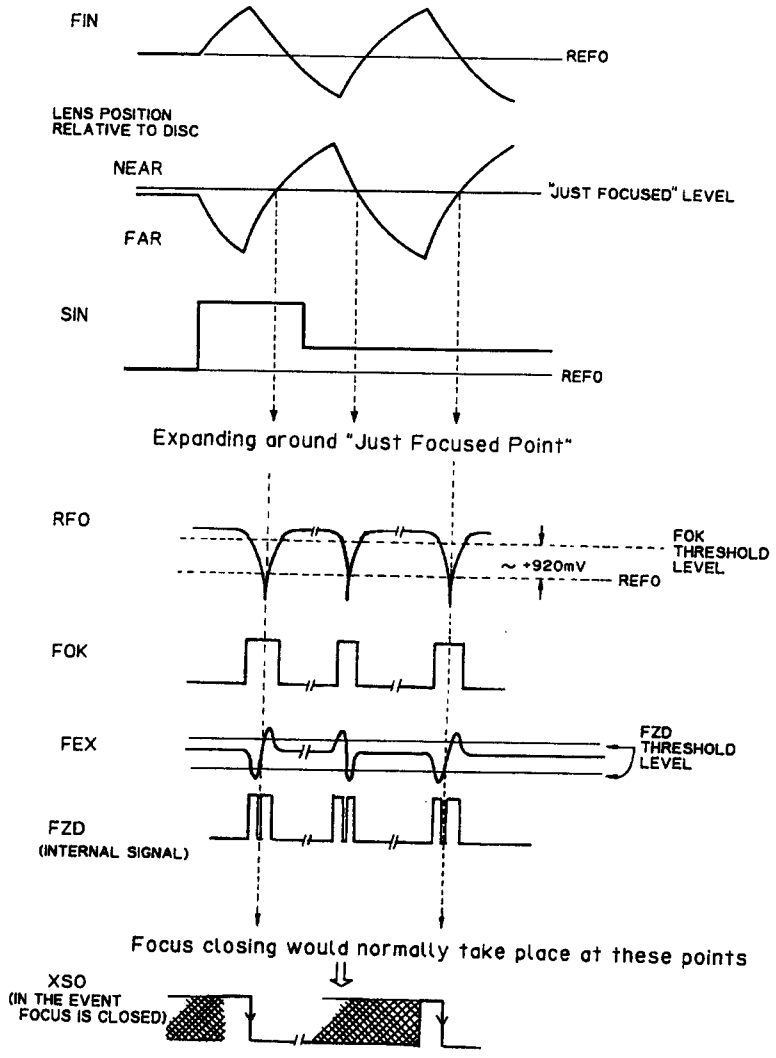


Fig.9 : FOCUS CLOSING SEQUENCE

a) FOK CIRCUIT

The FOK circuit inside the servo LSI compares the lower envelope of the RFO signal with a threshold level fixed by the microcomputer. Should the envelope level fall below this FOK level then FOK becomes high. This is used during focus close as stated and also during play to control a defect circuit, which switches the focus & tracking servos into a hold mode should the RFO envelope become disrupted by dirt, grease etc, thus increasing the player's defect response (figure 10).

The FOK threshold is approx. +920mV w.r.t. REFO. It is for this reason that the upper envelope should be adjusted to +1.1V DC w.r.t. REFO.

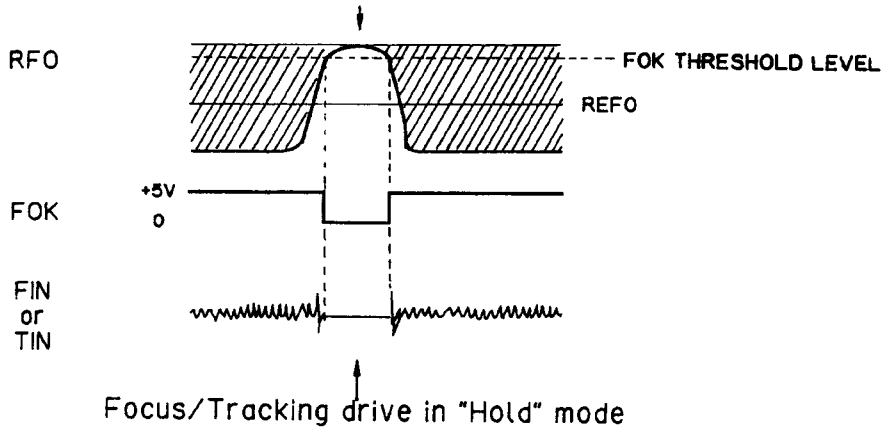


Fig.10 : DEFECT CIRCUIT

b) FZD CIRCUIT

The FZD circuit inside the servo IC compares the absolute value of the FE signal to a threshold value and outputs a high/low signal which is then used in the focus close sequence as stated.

At power on, the microcomputer switches the laser diode off and reads the value of the FE bias via the servo LSI's A/D port. The FZD threshold is set 200mV above this bias level.

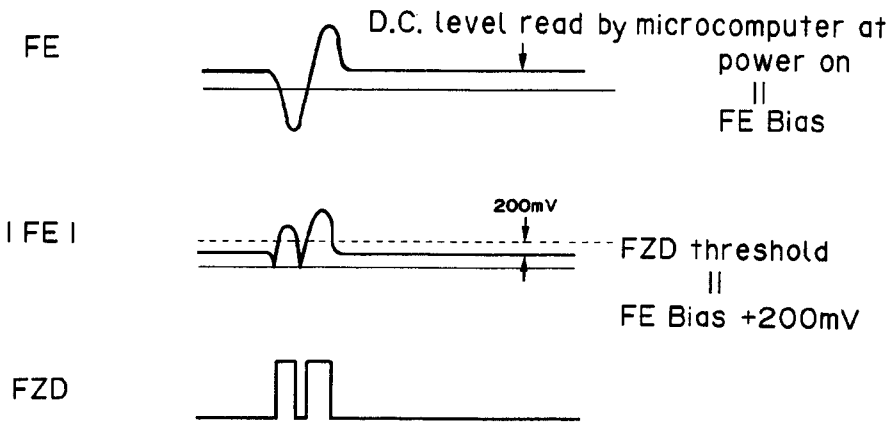


Fig.11 : FZD CIRCUIT

2) Tracking Servo System

The main tracking equalization takes place inside the UPD63700GF (figure 12). The equalizer response can be measured between TEX and TIN and will have the shape shown in figure 13.

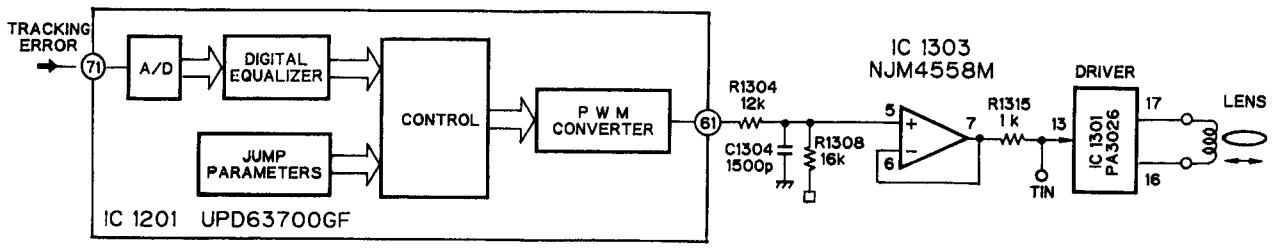


Fig.12 : TRACKING SERVO BLOCK DIAGRAM

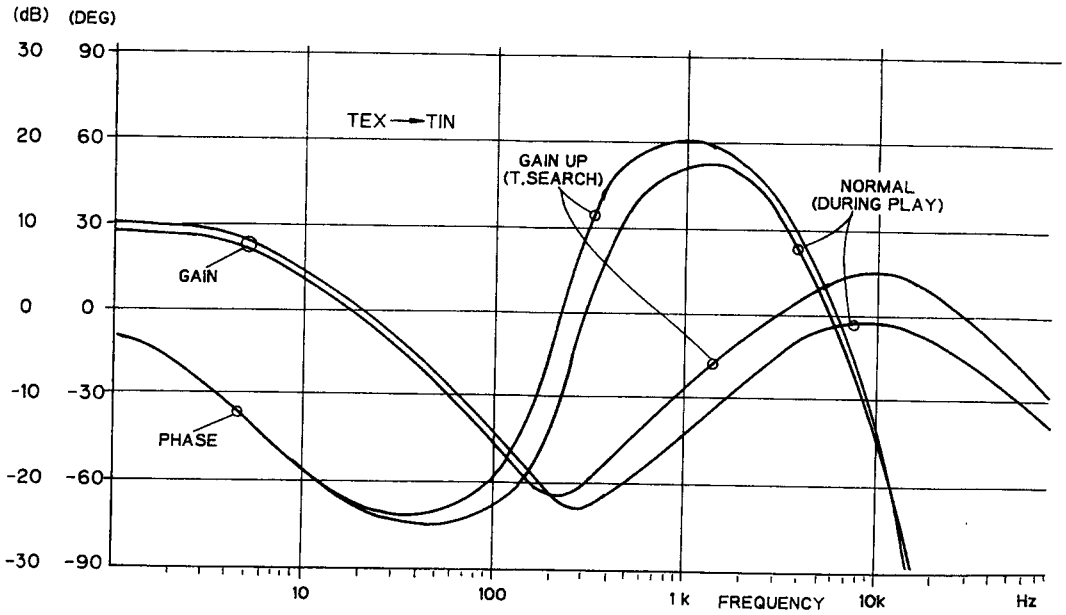


Fig.13 : TRACKING EQUALIZER

a) Track Jumping

Track jumping is performed automatically by the servo LSI upon receipt of the appropriate command from the microcomputer. The present microcomputer is programmed to use 1,4,10 & 32 track jump commands to achieve searching. The 32 track jump command may be used in pairs (64 tracks) or triplets (100 track) as required. In TEST MODE the 1,4,10,32 & 100 track jump and carriage move sequences may be observed by selecting the appropriate mode.

Note that the number of tracks jumped is controlled by setting an internal counter to half the total value and then counting this down using the zero crossing edges of TEC1. Once the counter is at zero, a brake pulse of fixed duration is output to bring the lens to a halt; allowing tracking to be closed and normal play to continue.

For a fixed period of time after a multi-track jump has been performed, a "tracking brake" circuit is activated in conjunction with a "gain-up" equalizer to ensure that the servo achieves stabilization before entering normal play.

Manual track search, in normal mode, uses a group of single track jumps to achieve FWD/REV at approx. ten times normal play speed.

The figures 14 & 15 show the timing charts for the single and multiple jump commands.

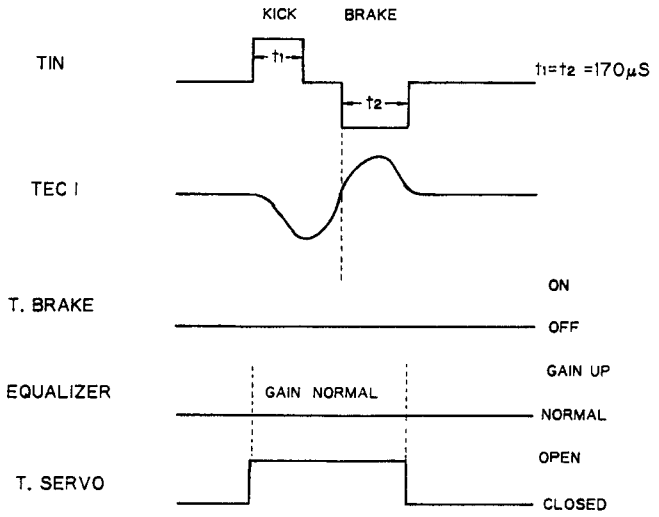


Fig.14 : SINGLE TRACK JUMP

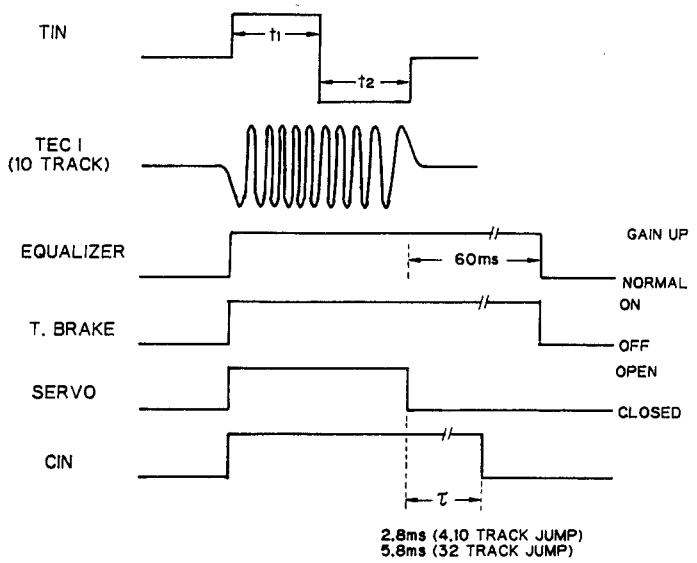
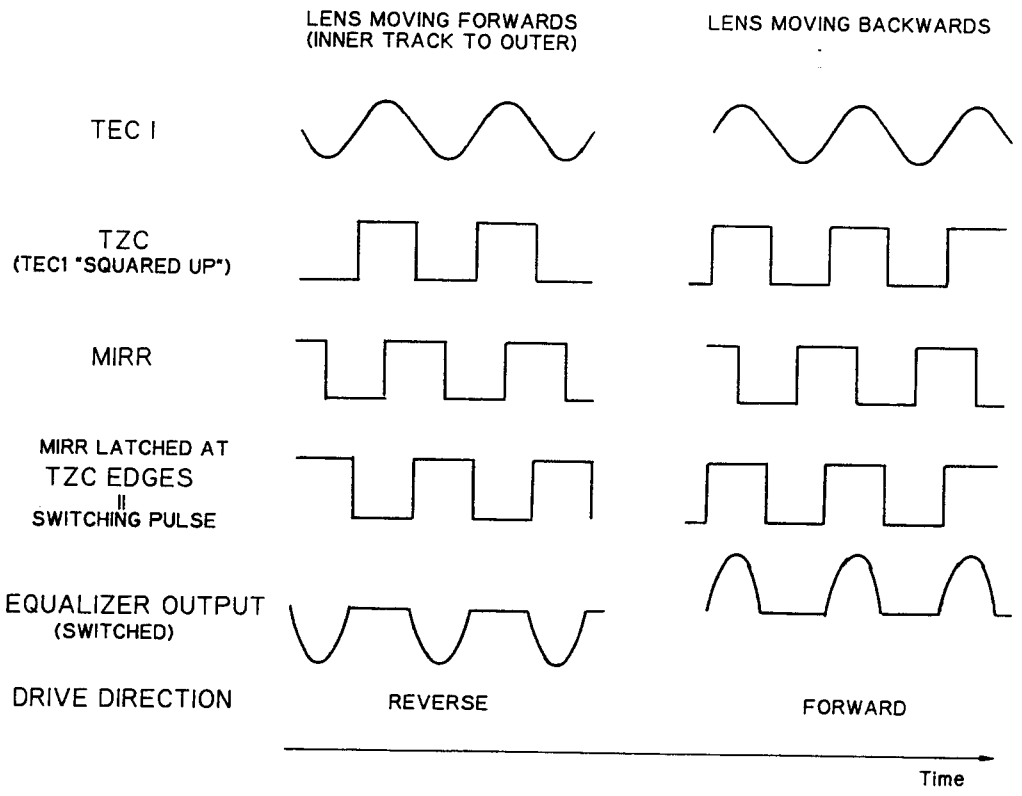


Fig.15 : MULTI TRACK JUMP

b) Tracking Brake Circuit (Figure 16)

This relies on determining which direction the lens is moving and only outputting the portion of the drive waveform which acts to oppose this motion. Direction of motion is deduced from TEC1 and the MIRR signal and knowledge of their phase relation.



Note : Equalizer output assumed to have same phase as TEC1.

Fig.16 : TRACKING BRAKE CIRCUIT

c) MIRROR Circuit

The MIRR circuit indicates if the laser beam is on or off track.

MIRR = 'H' => off track, MIRR = 'L' => on track.

MIRR is generated by detecting the upper and lower envelopes of the RFO waveform and producing a difference signal which is then compared with a peak-held version of itself to determine if the envelope size has dropped below a certain percentage.

If so, this is assumed to be due to the beam going off-track ; in practice dirt on the disc can also give the same effect (see figure 17).

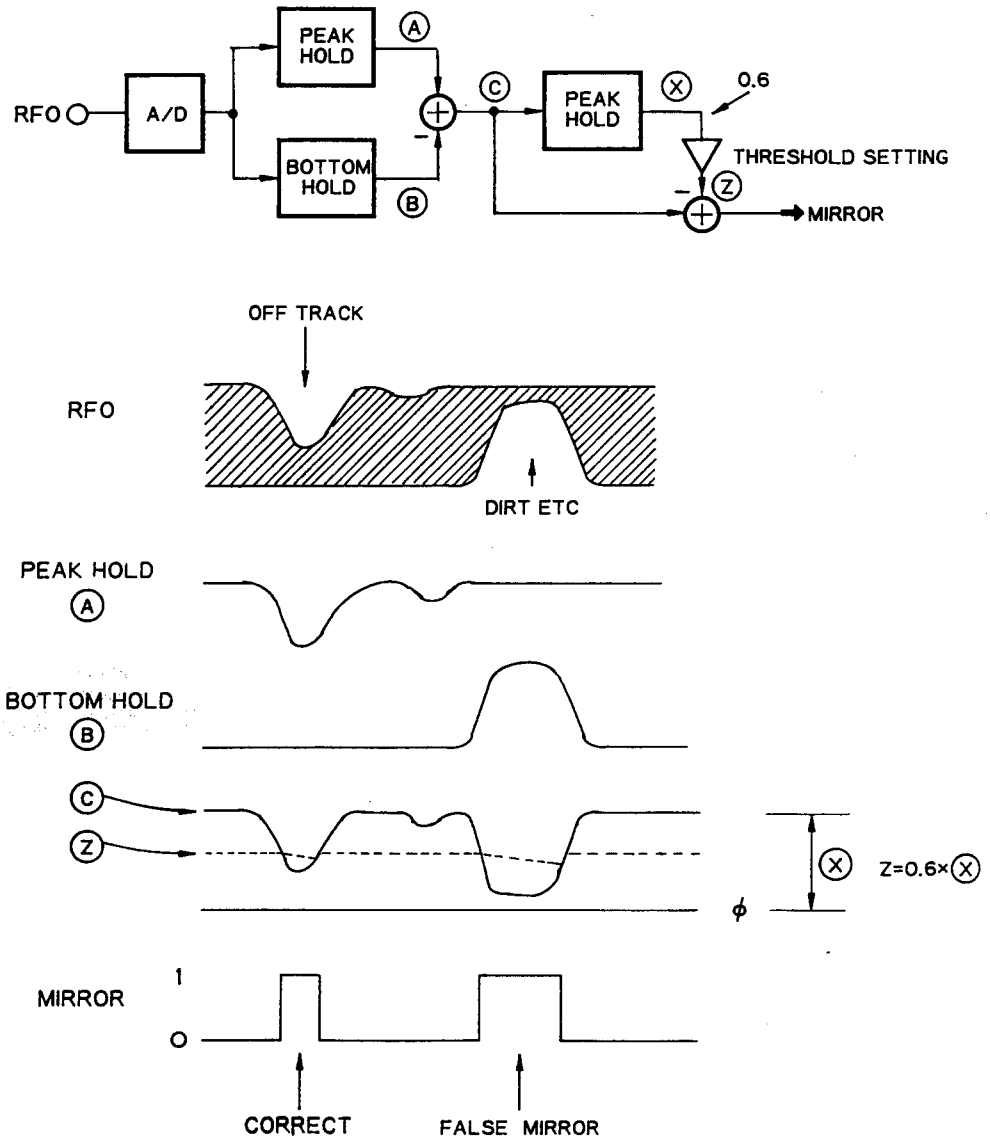


Fig.17 : MIRROR CIRCUIT & SIGNAL DIAGRAM

3) Carriage Servo System

The carriage servo system takes it's input from the low frequency component of the tracking equalizer output. This is amplified and equalized, and the output fed to the carriage motor via the PWM converter, LPF and driver IC. The gain of the equalizer is set so that when the lens is offset from it's center by a set amount the voltage at the carriage motor is enough to overcome friction and move the carriage forward.

Because the carriage motor will only begin moving when the applied voltage is great enough to overcome friction the drive voltage is cut-off inside the servo LSI until it reaches an appropriate level ; thus saving on wasted power dissipation.

Due to eccentricity of the disc etc. the threshold level may be crossed several times before the carriage assembly actually moves. This can result in a series of pulses being applied to the carriage motor.

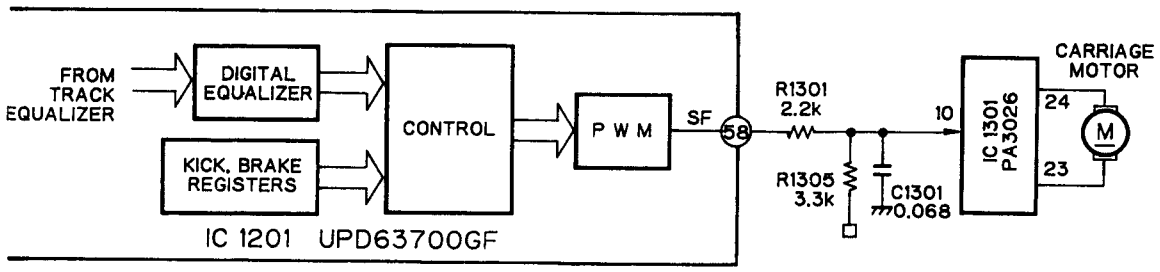


Fig.18 : CARRIAGE SERVO CIRCUIT

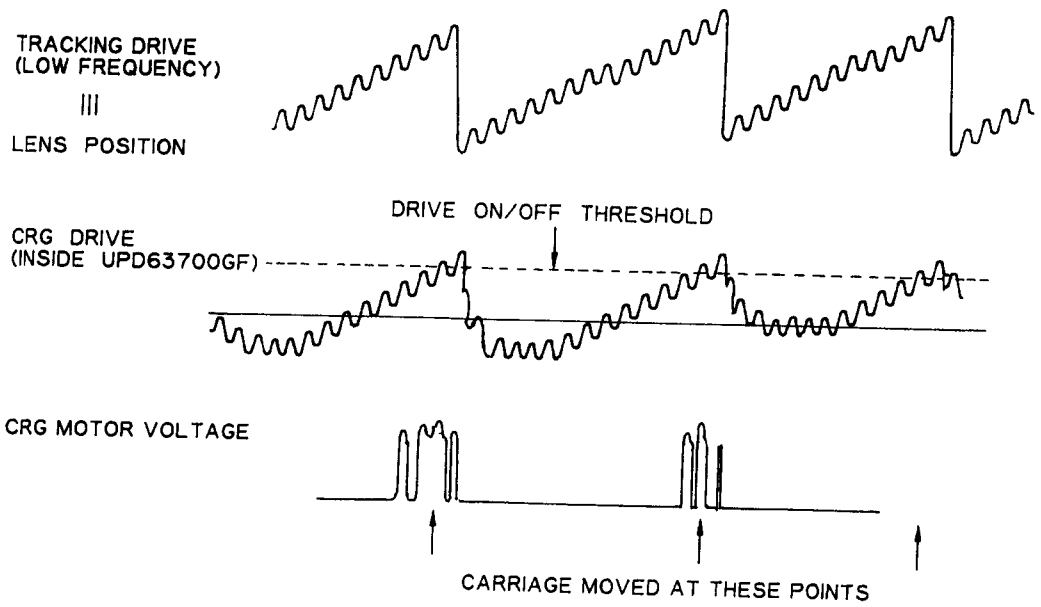


Fig.19 : CARRIAGE WAVEFORM

4) Spindle Servo

The spindle servo has a number of different modes :

(i) Kick : Used at set-up to bring the spindle up to speed from stand-still.

(ii) Offset : This is used i) At set-up, after spindle kick and before AGC has finished.
ii) During play if focus is suddenly disrupted.

(iii) Adaptive Servo : This is the CLV mode which ensures that the linear velocity of the disc as seen by the laser spot is kept constant. During play, a timing signal is extracted from the EFM signal and used to generate speed and phase error signals. These error signals are summed and fed into a servo equalizer to produce a drive signal via the PWM converter.

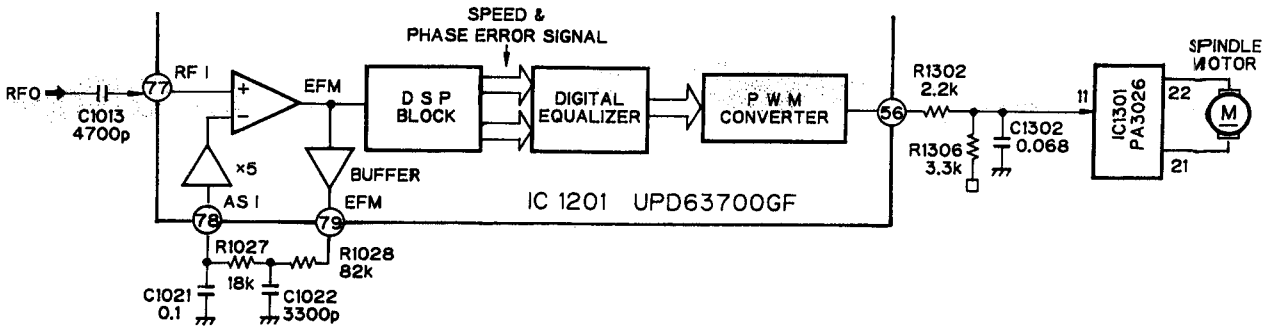
(iv) Brake : This is used to bring the disc to a stop quickly, for ejection or when CD source is de-selected or for any other reason. The servo LSI puts out a brake level and monitors the EFM signal. When the longest pattern in the EFM signal is longer than a fixed amount an internal flag is set. By monitoring this flag the microcomputer can judge when the disc has stopped and proceed to eject etc. If this flag is not set within a certain time limit the servo is switched to STOP mode and eject is implemented after a wait period.

(v) Stop : This occurs at power on or during disc eject. The spindle motor voltage is zero.

(vi) Rough : This is used in normal mode to control the linear velocity of the disc when the carriage is being moved for fast access. A speed signal is deduced from the EFM waveform and input to the spindle equalizer. This mode should be used in TEST MODE to perform the grating adjustment.

a) EFM Comparator

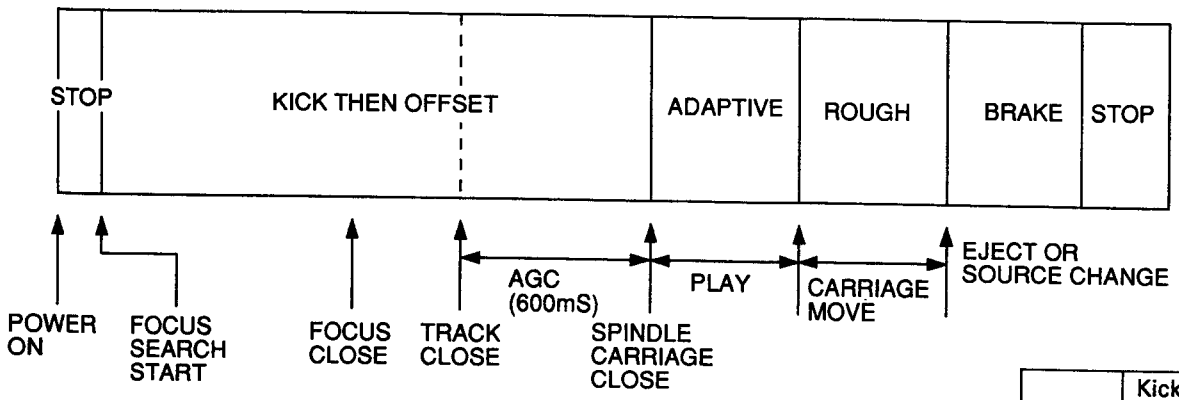
This circuit 'squares' up the analog RF signal into a digital EFM signal. In order to ensure minimum errors it is necessary to use a feedback circuit to match the DC level of the threshold to the center of the RF waveform. This circuit (shown in the spindle servo block diagram) uses the fact that the EFM signal should have no DC component. By feeding back the EFM signal's DC level the threshold level changes until the DC level is zero and the threshold, by definition, is at the exact center of the RFI waveform. The filtering in the feedback has been adjusted to ensure minimum error.



(EFM Compalator Circuit)

Fig.20 : SPINDLE CIRCUIT

• Normal Mode



	Kick Time
12cm	800mS
8cm	300mS

• Test Mode

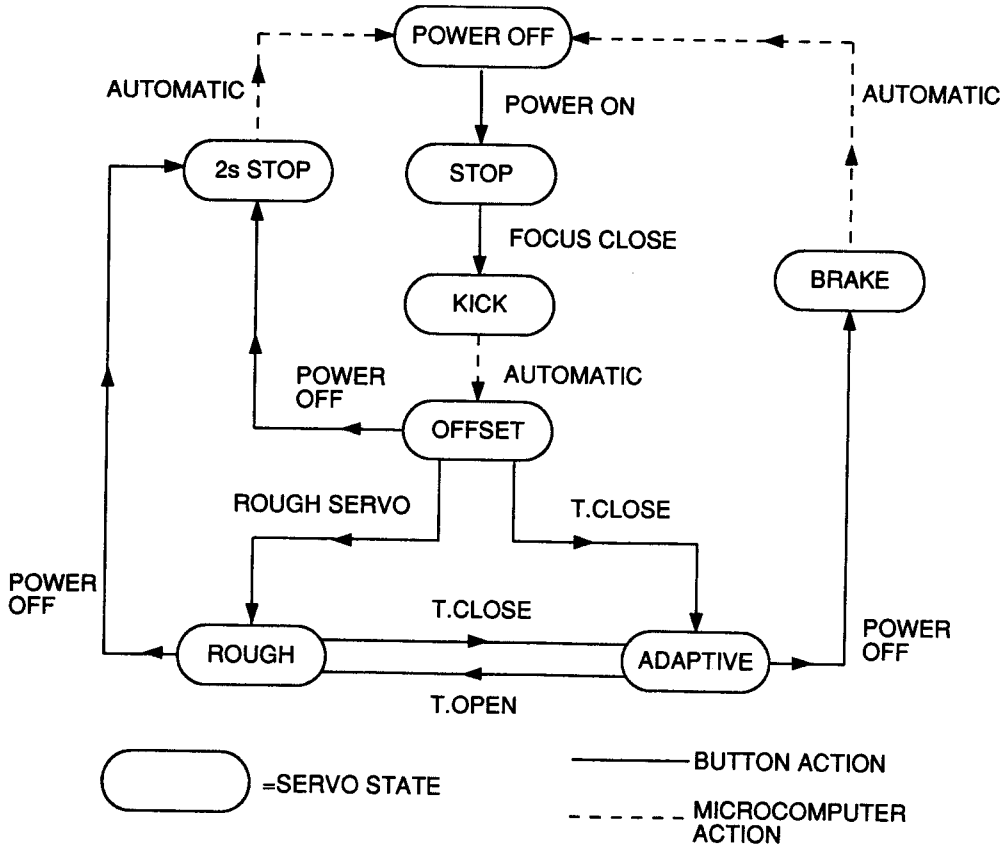


Fig.21 : SPINDLE SERVO MODES

5) Automatic Gain Control (AGC)

The servo LSI UPD63700GF contains a new function which allows the microcomputer to automatically adjust the gain of the focus and tracking servos every time a new disc is inserted or the CD source is selected. The block diagram of the AGC circuit is shown in figure 22. Basically, a small disturbance signal is inserted into the servo loop at a fixed frequency and the response of the loop is measured via the filtered signals G1 and G2. For a properly adjusted servo loop the amplitudes of G1 and G2 should be equal. The microcomputer reads in these values, does a simply calculation and adjusts the loop gain appropriately.

In order to achieve a high degree of accuracy this adjustment is performed a number of times.

As long as there is power supplied to the microcomputer it remembers the previous adjustment point and uses this as a starting point. Thus, should the system degrade with time (actuator sensitivity, dirt build-up, circuit degradation etc.) the microcomputer can follow this trend and keep the loop gain optimized.

If power to the microcomputer is removed, it forgets the previous adjustment point and assumes a default value.

At shipping the CD player will be within 5dB of this default and no problems should occur. For an older player however this is not so and it is possible that servo closure may not take place immediately. In this case, the microcomputer adjusts the gain 'blind', searching for a stable point.

In TEST MODE, the result of the AGC can be monitored. Once tracking close (with AGC) has been performed the set can be made to display the present value of the gain block. The default value is displayed as '20', which is the value a typical PU unit, PCB & test disc would result in. If for some reason the loop gain had dropped by, say, 6dB (1/2 the typical value) then the gain block will be adjusted during AGC to twice it's default value ; resulting in a gain of '40'. Similarly a set with a loop gain twice the typical will display '10' as the present gain.

Using this, it is possible to 'measure' the loop gain of the servo without the need for any instrumentation. The players shipped from the factory are checked with a test disc so that the value of the gain block after AGC is within the range 11 - 45.

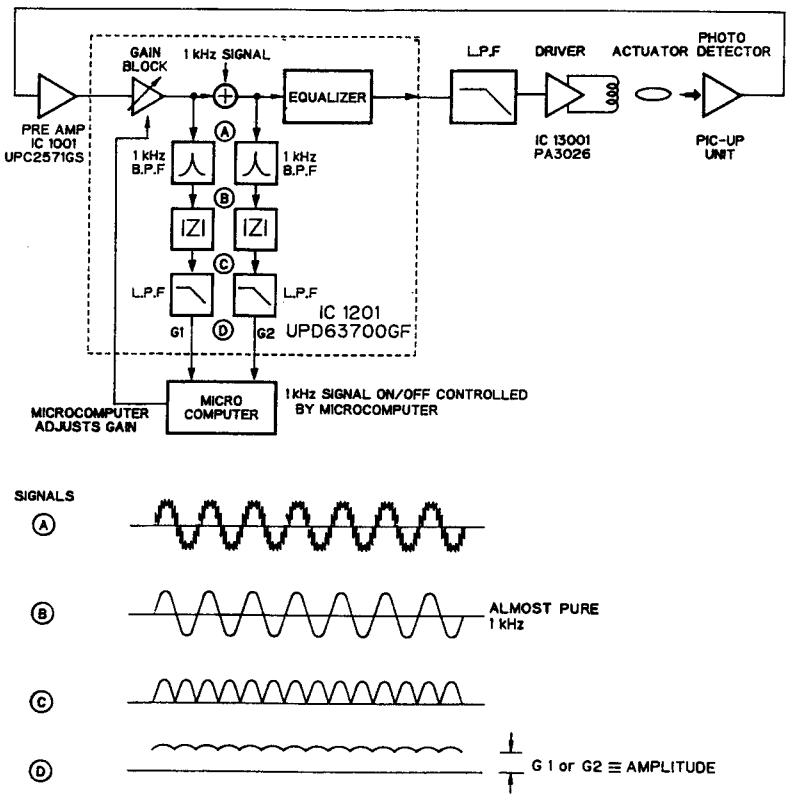


Fig.22 : AGC BLOCK DIAGRAM

6) Power Supply & Loading Motor

Figure 23 shows the block diagram of the power supply and loading motor.

The CD module receives VD (9V) and splits this up into BVD (8.3V), VM (7.6V), and V1 (7.0V) which supply the 4ch servo driver, loading motor and 5V regulator respectively. VD is also used directly by the disc detection LED's. The 4ch driver and laser diode are enabled by the CONT line from the microcomputer. The 5V supply to the servo LSI, pre-amp and audio circuits is enabled by the CD5VON line. The loading motor has no separate enabling input ; the control lines LOAD and EJ serve the same purpose.

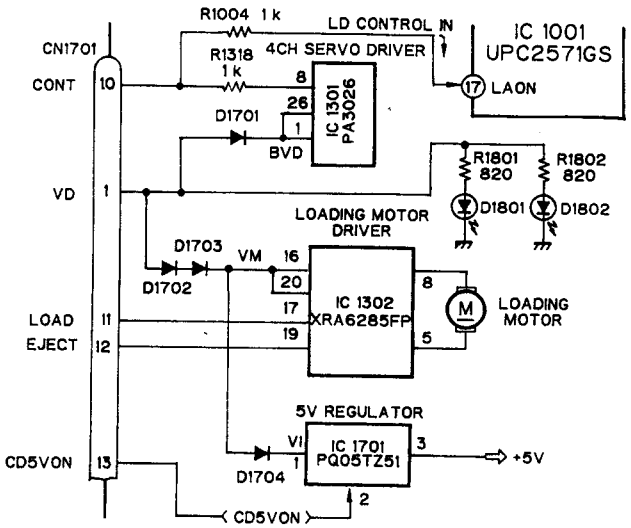


Fig.23 : POWER SUPPLY & LOADING MOTOR

2. MECHANISM DESCRIPTION

● Disc Loading

1.There are two photo transistors in front and behind the rubber roller that convey the disc, and two corresponding LEDs mounted on the unit pcb.
(When the LEDs light, the photo transistor voltage is L.)

2.When the disc is inserted to a point in front of the rubber rollers, a H voltage is recorded on the photo transistor in the front section(P1) and the loading motor starts.

3.The motor drive is transmitted via the gears, the rubber rollers revolve, and the disc is conveyed.
The rubber rollers are held on the tip of the loading arm by the strength of the loading arm spring, and the guide arm is in the raised position.
This gives the guide arm and rubber roller a suitable adhesive strength to push forward the disc which is positioned between them.

4.The clamper arm distinguishes the size of the disc and has a centering mechanism which clamps the disc in the center of the spindle motor.

The centering arm and centering lever are a single unit on top of the clamper arm, which keeps the fulcrum movement centered.

Centering pins and lock arms are attached to the tips of the centering arm.

The centering pins are positioned so that when an 8cm disc is positioned above the spindle motor it's external edge touches the pins. Lock arms revolve around the centering pins. For an 8cm disc it is locked in place by the clamper arms. For a 12cm disc, the lock is released and moves according to the broken line in figure 25.

The position of the detect arm which is mounted on the centering arm at the bottom right of the figure differs for 8cm and 12cm discs. When a disc is positioned above the spindle motor the detect lever, which moves in a clockwise direction on the outside edge, moves to the lower section of the figure.

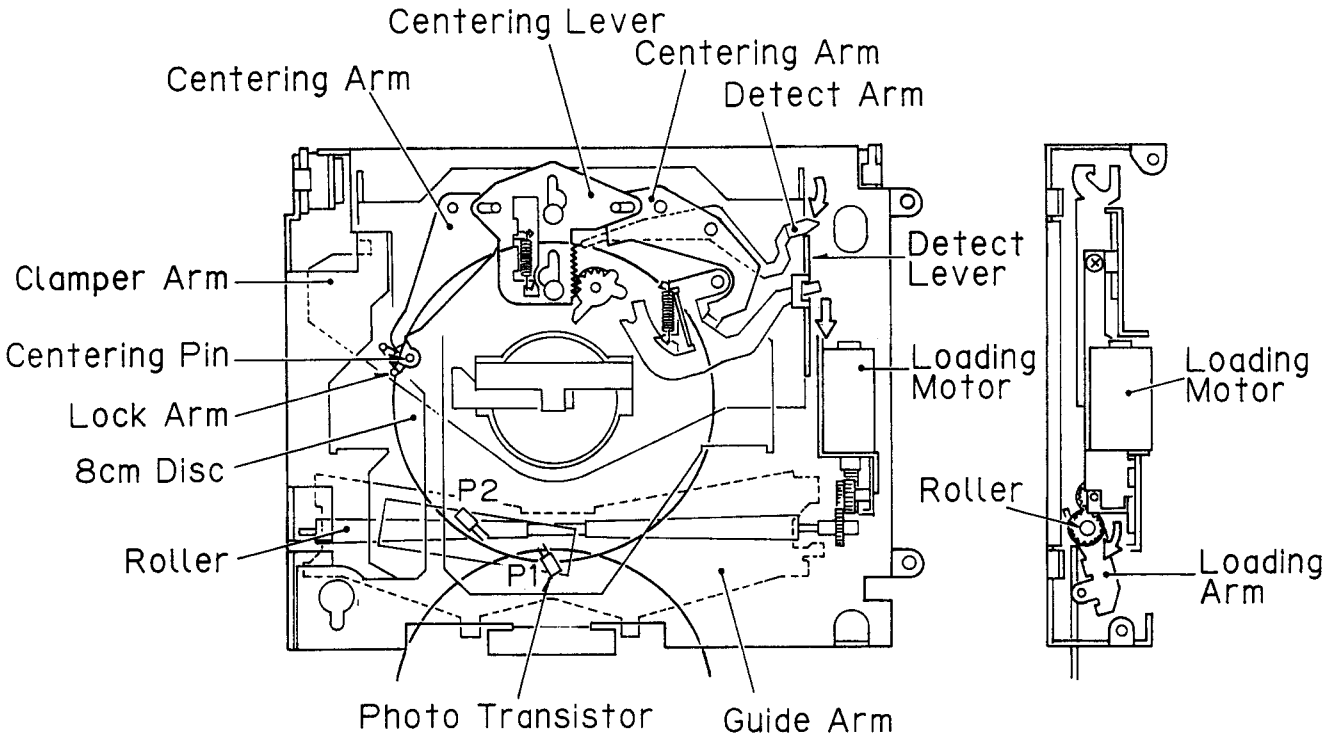

Centering Lever
Centering Arm
Centering Arm
Detect Arm
Clamper Arm
Centering Pin
Lock Arm
8cm Disc
Roller
P2
P1
Photo Transistor
Guide Arm
Detect Lever
Loading Motor
Loading Motor
Roller
Loading Arm

Fig.24

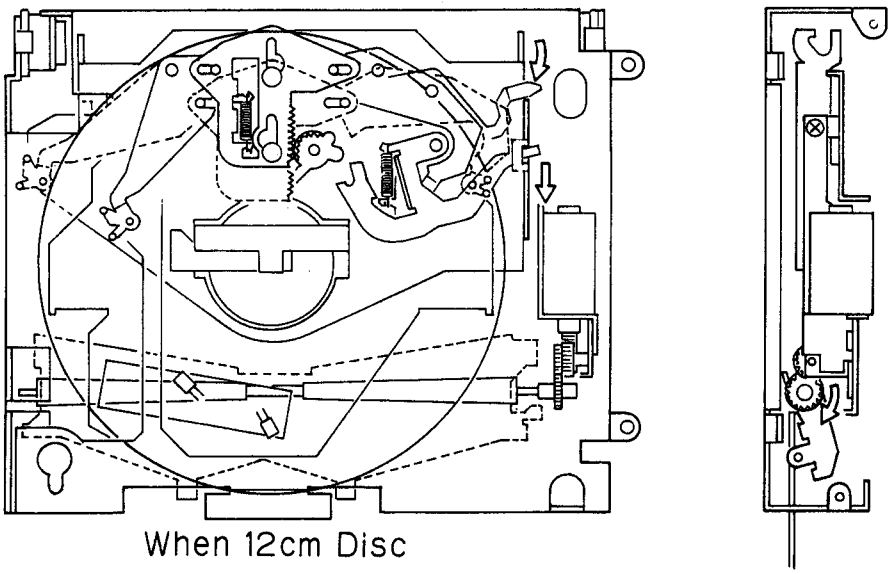

When 12cm Disc

Fig.25

● Clamp Operation

1.The rack gear in contact with the detect lever is engaged with the gear driven by the loading motor, thereby moving the L arm in the arrow direction.
The clamper arm, which had been raised by the L arm, moves down and clamps the disc.

The lock lever which interlocks with the L arm moves the loading arm.
As a result, the rubber roller is pushed down, leaving the disc. At the same time, the guide arm moves down, too. At the position where the lock lever turns the clamp switch on, loading comes to an end.

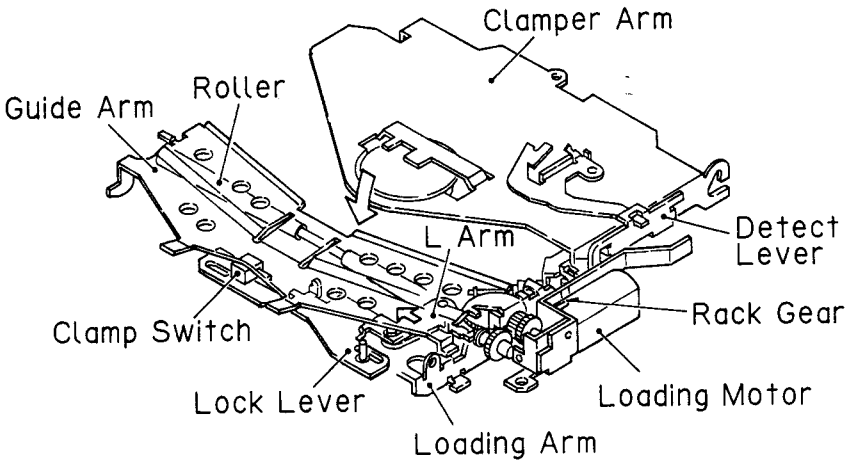


Fig.26

● Mechanism Lock

1.In the eject condition two lock arms are positioned in the frame hole and the front side of the floating section is locked in both vertical and horizontal directions.

The L arm moves the rotating lock lever to the left. The mechanical lock arms L and R move in the directions designated by the arrows and the floating section is released from the frame.

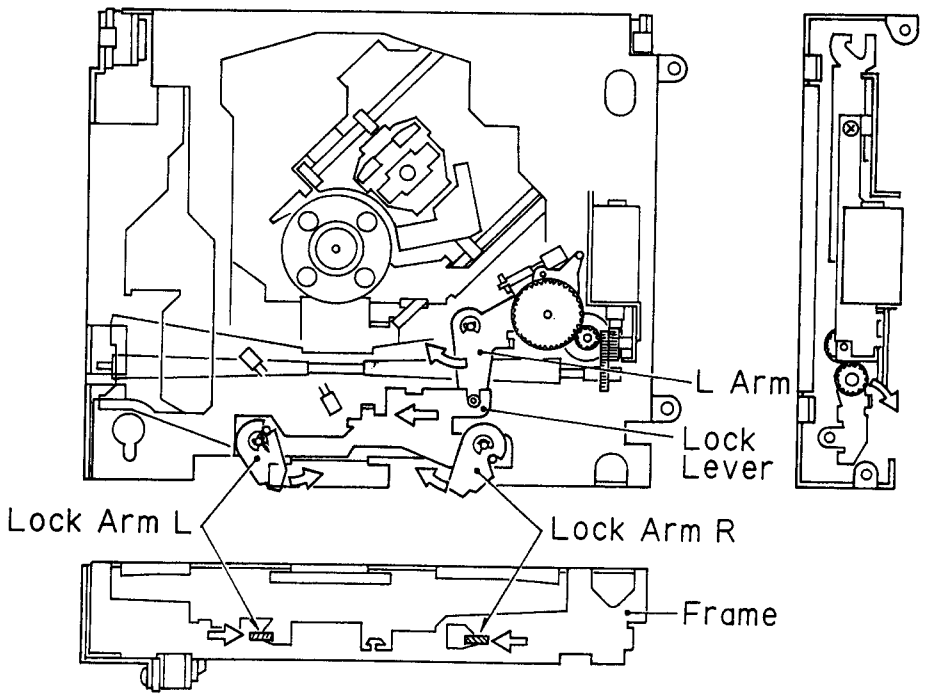


Fig.27

● Eject

1.The eject mechanism operates by reversing the rotation which takes place when the loading motor loads. The L arm moves and operates the mechanical lock, the clamp is released, the roller is applied, and the disc is conveyed. In the case of a 12cm disc the loading motor stops at the position at which the photo transistor lights at the rear of the rubber roller section.

However, in the case of an 8cm disc, motor revolution stops after a fixed period of time. In this process the disc type is recognized during play, by the voltage of the photo transistor(P1) located in front of the rubber rollers.

3. DISASSEMBLY

● How to Remove the Dampers

(Fig.28)

1. While keeping the CX-540 powered on, insert a disc and put it into play mode (with the arm unit lowered).
2. Power off the CX-540 while in play mode.
3. Unplug the connector and remove the CX-540.

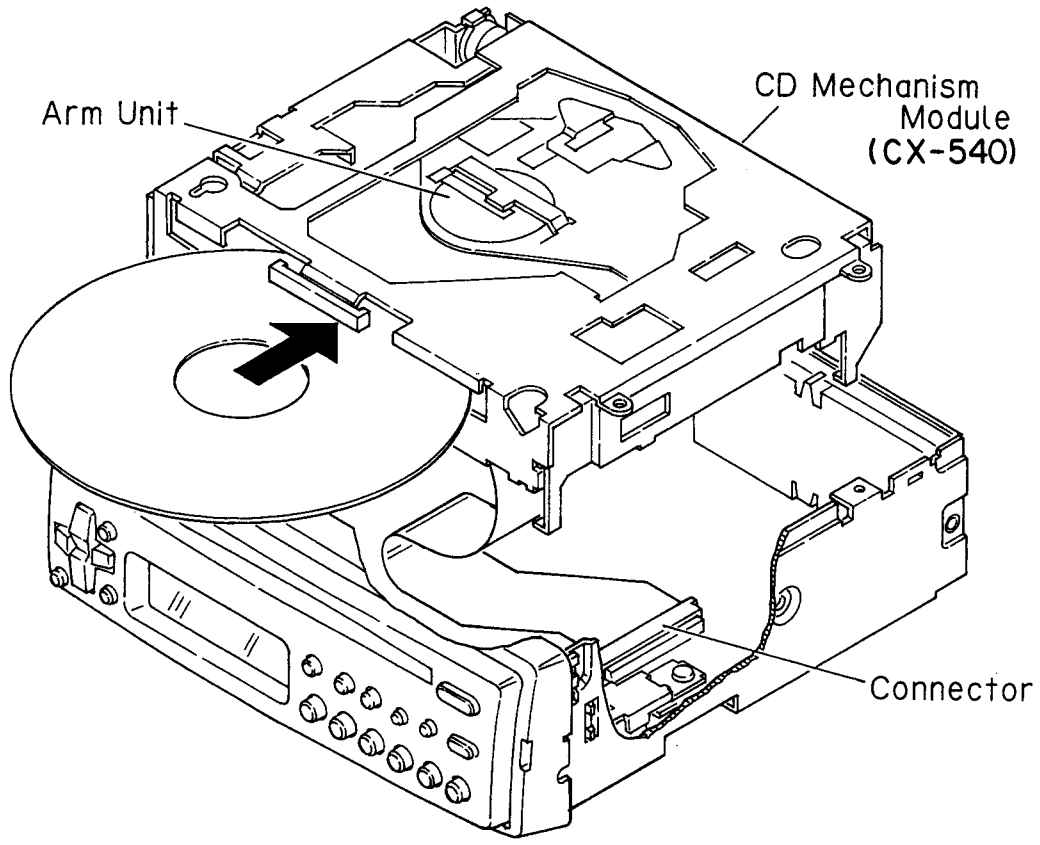


Fig.28

(Fig.29)

4. Unfasten the four screws marked with arrows.
5. Unfasten the two screws A and remove the frame.
6. Unfasten the two screws B and remove both damper and holder at the two locations.

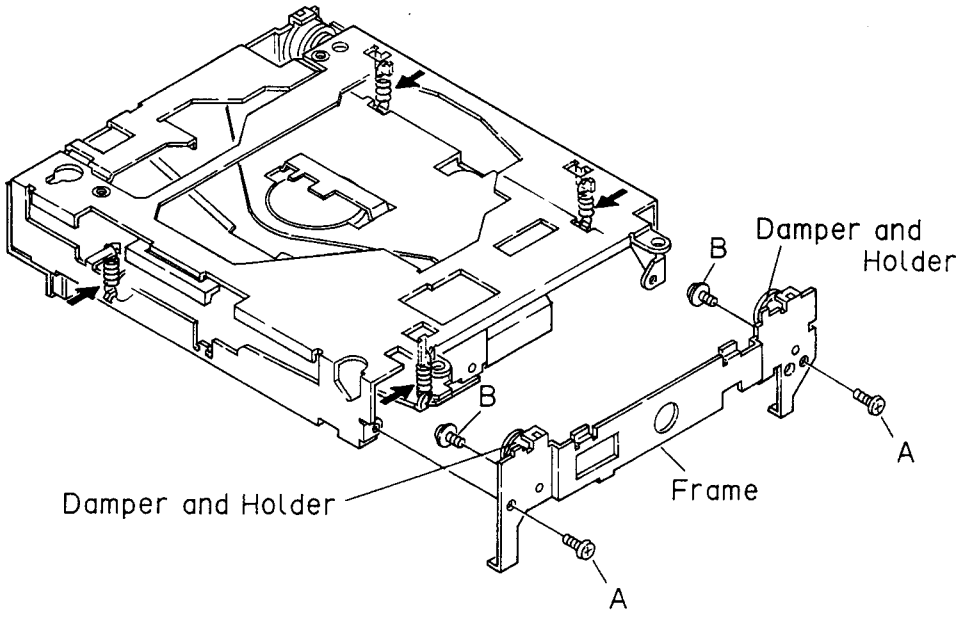


Fig.29

(Fig.30)

7. Remove the frame unit.
8. Unfasten the two screws and remove both damper and holder at the two locations.

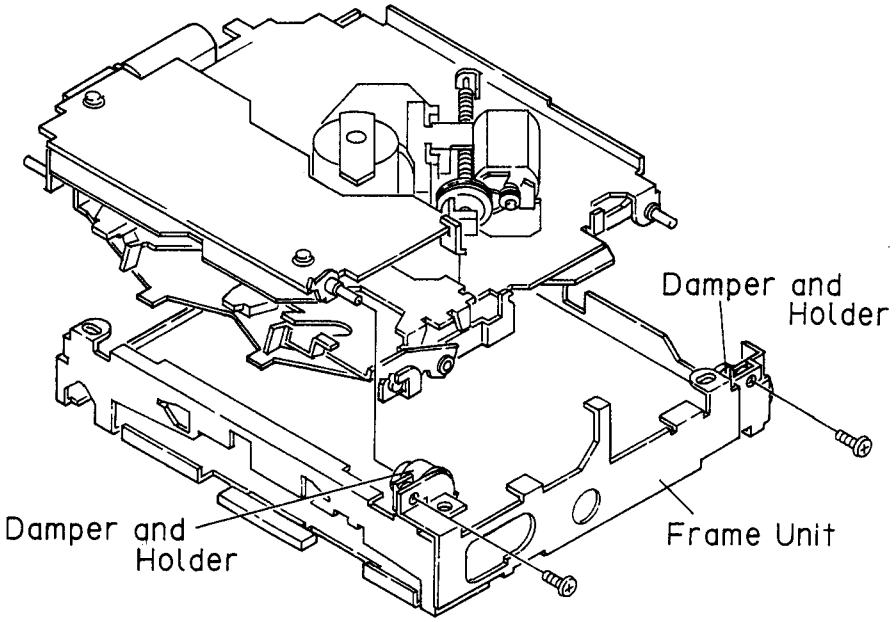


Fig.30

● How to Remove the Spindle Motor

(Fig.31)

1. Remove spring A as marked with an arrow.
2. Remove springs B and C and the arm unit.
3. Remove spring D and the lever.
4. Turn the support wheel so that the screw head becomes visible through the hole.
5. Unfasten the two screws and remove the spindle motor.

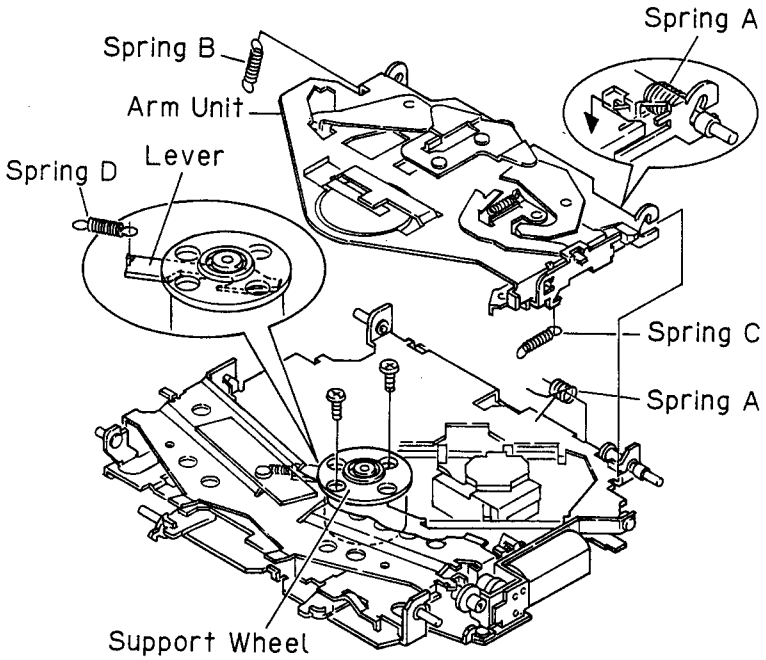


Fig.31

● How to Remove the Loading Motor

(Fig.32)

1. Remove the washer and the arm.
2. Remove the spring.

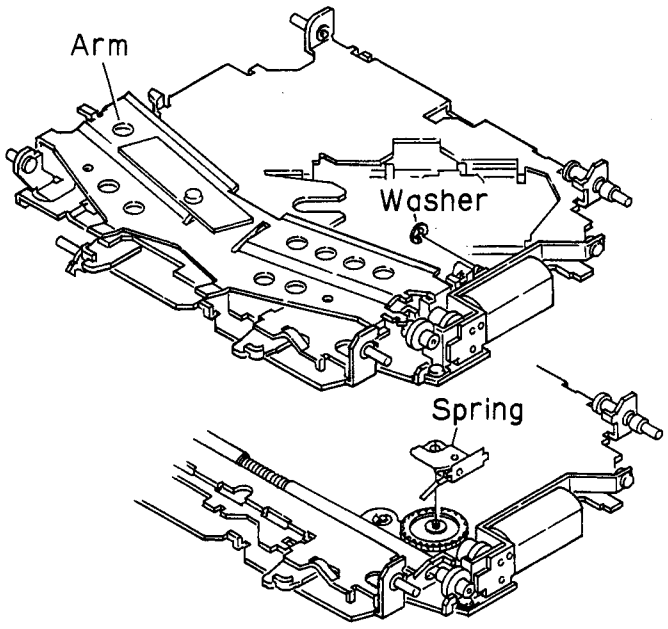


Fig.32

(Fig.33)

3. Unfasten the two screws and remove the bracket unit.

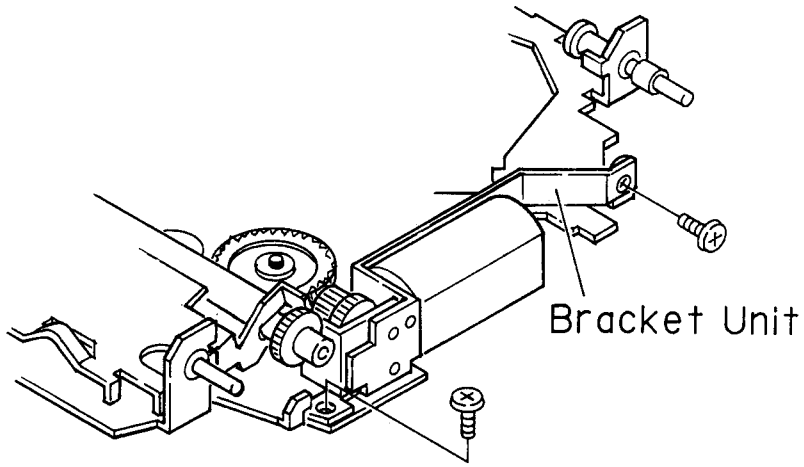


Fig.33

(Fig.34)

4. Unfasten screw C and remove both gear unit and gear.
5. Unfasten the two screws D and remove the loading motor.

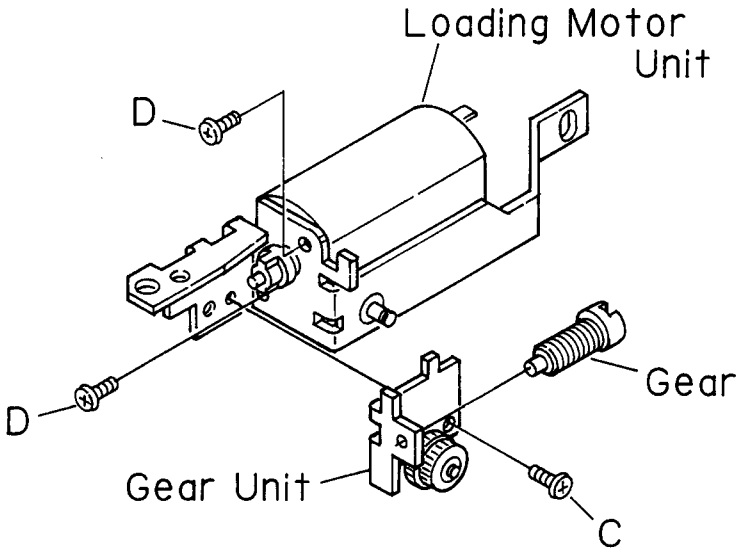


Fig.34

● How to Remove the PU Unit and the Carriage Motor

(Fig.35)

1. Latch spring E as marked with an arrow in the illustration.
2. Attach a short pin to protect the PU unit.
3. Unplug the connector.
4. Unfasten the screw and remove spring F.
5. Remove the PU unit.

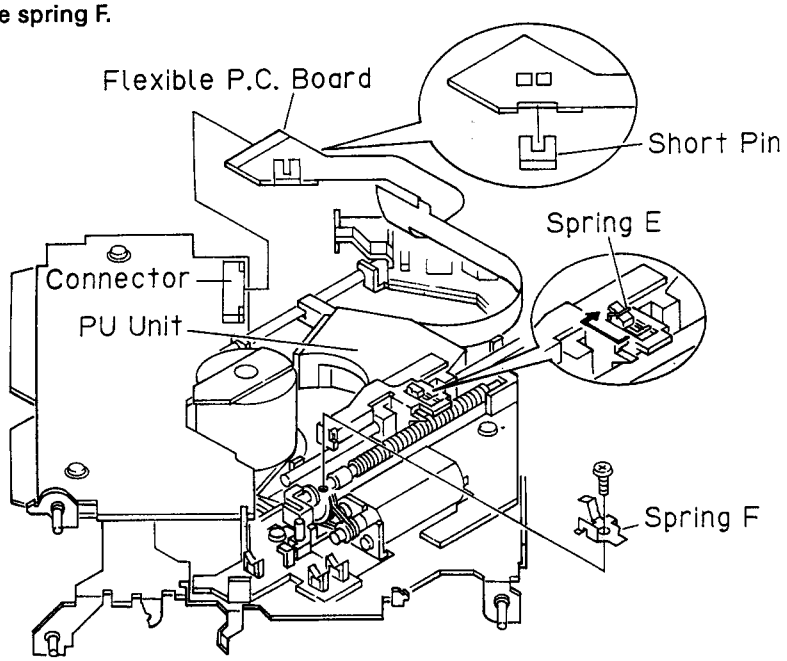


Fig.35

(Fig.36)

6. Unfasten screw E and remove the holder, belt and screw unit.
7. Unfasten the two screws F and remove the carriage motor.

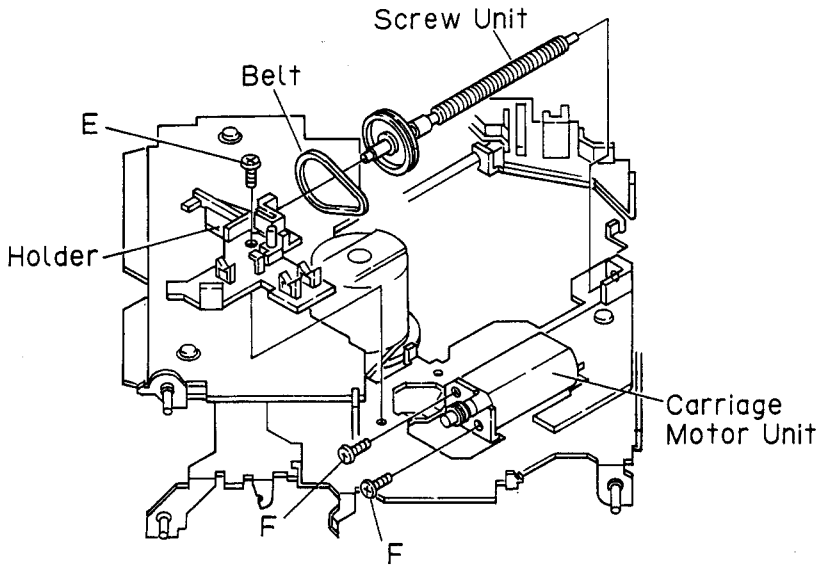


Fig.36

Service Manual

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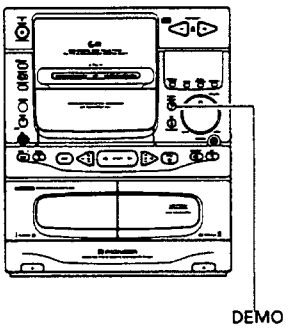
The Art of Entertainment



ORDER NO.
RRV1515

STEREO FILE-TYPE CD CASSETTEDECK RECEIVER

XR-P260F

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model	Power Requirement	The voltage can be converted by the following method.
	XR-P260F		
KUXJ	○	AC120V	———
KCXJ	○	AC120V	———
DDXJ	○	AC110–127V/220–230V/240V	With the voltage selector
DDXJ/NC	○	AC110–127V/220–230V/240V	With the voltage selector
DLXJ/NC	○	AC110–120V/220–230V/240V	With the voltage selector
YPWXJ	○	AC240V	———

• For the circuit and mechanism descriptions, refer to the service guide RRV1430 for XR-P760F.

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T-DFY FEB. 1996 Printed in Japan

1. SAFETY INFORMATION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING
Lead in solder used in this product is listed by the California Health and Welfare agency as a known reproductive toxicant which may cause birth defects or other reproductive harm (California Health & Safety Code, Section 25249.5).
When servicing or handling circuit boards and other components which contain lead in solder, avoid unprotected skin contact with the solder. Also, when soldering do not inhale any smoke or fumes produced.

NOTICE
(FOR CANADIAN MODEL ONLY)
Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE
(POUR MODÈLE CANADIEN SEULEMENT)
Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

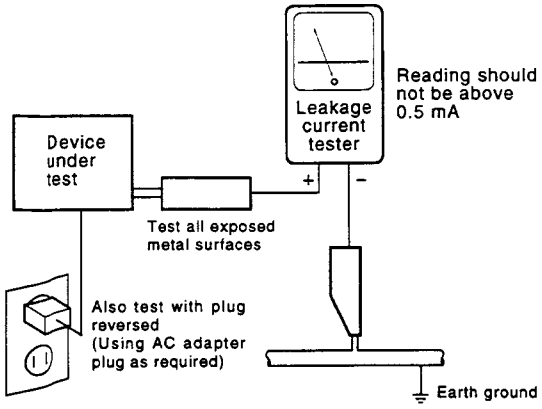
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60 Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5 mA.


Reading should not be above 0.5 mA
Leakage current tester
Device under test
+
-
Test all exposed metal surfaces
Also test with plug reversed (Using AC adapter plug as required)
Earth ground

AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage , etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.
The use of a substitute replacement component which dose not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

(FOR EUROPEAN MODEL ONLY)

VARO !
AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.

ADVERSEL:
USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION UNDGÅ UDSAETTELSE FOR STRÅLING.

VARNING !
OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRAKTA EJ STRÅLEN.

LASER
Kuva 1
Lasersateilyn varoitusmerkki

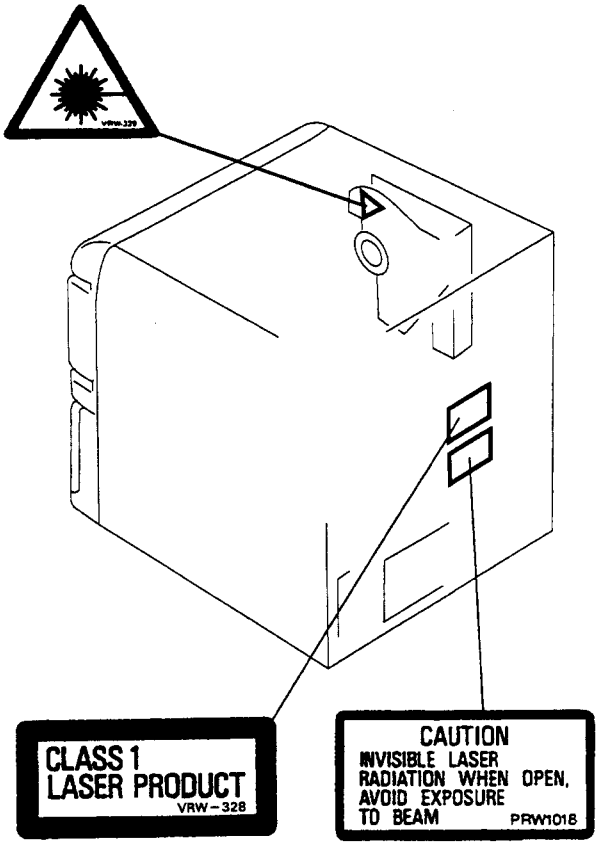
WARNING !
DEVICE INCLUDES LASER DIODE WHICH EMITS INVISIBLE INFRARED RADIATION WHICH IS DANGEROUS TO EYES. THERE IS A WARNING SIGN ACCORDING TO PICTURE 1 INSIDE THE DEVICE CLOSE TO THE LASER DIODE.

IMPORTANT
THIS PIONEER APPARATUS CONTAINS LASER OF CLASS 1.
SERVICING OPERATION OF THE APPARATUS SHOULD BE DONE BY A SPECIALLY INSTRUTED PERSON.

LASER DIODE CHARACTERISTICS
MAXIMUM OUTPUT POWER: 5 mw
WAVELENGTH: 780 – 785 nm

LASER
Picture 1
Warning sign for laser radiation

LABEL CHECK (for DLXJ/NC and YPWXJ types)



Additional Laser Caution

1. Laser Interlock Mechanism
   The position of the switch (S651) for detecting loading state is detected by the system microprocessor, and the design prevents laser diode oscillation when the switch (S651) is not on $\overline{\text{CLMP}}$ terminal side ($\overline{\text{CLMP}}$ signal is OFF or high level.) Thus, the interlock will no longer function if the switch (S651) is deliberately set to $\overline{\text{CLMP}}$ terminal side. (low level)
   The interlock also does not function in the test mode*.
   Laser diode oscillation will continue, if pin 1 of M51593FP (IC101) on the PRE-AMP BOARD ASSY mounted on the pickup assembly is connected to GND, or pin 19 is connected to low level (ON), or else the terminals of Q101 are shorted to each other (fault condition).

2. When the cover is opened, close viewing of the objective lens with the naked eye will cause exposure to a Class 1 laser beam.

* *Refer to page 55.*

2. EXPLODED VIEWS, PACKING AND PARTS LIST

NOTES :

- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

2.1 EXTERIOR

■ Contrast of XR-P260F/KUXJ, KCXJ, DDXJ, DDXJ/NC, DLXJ/NC and YPWXJ

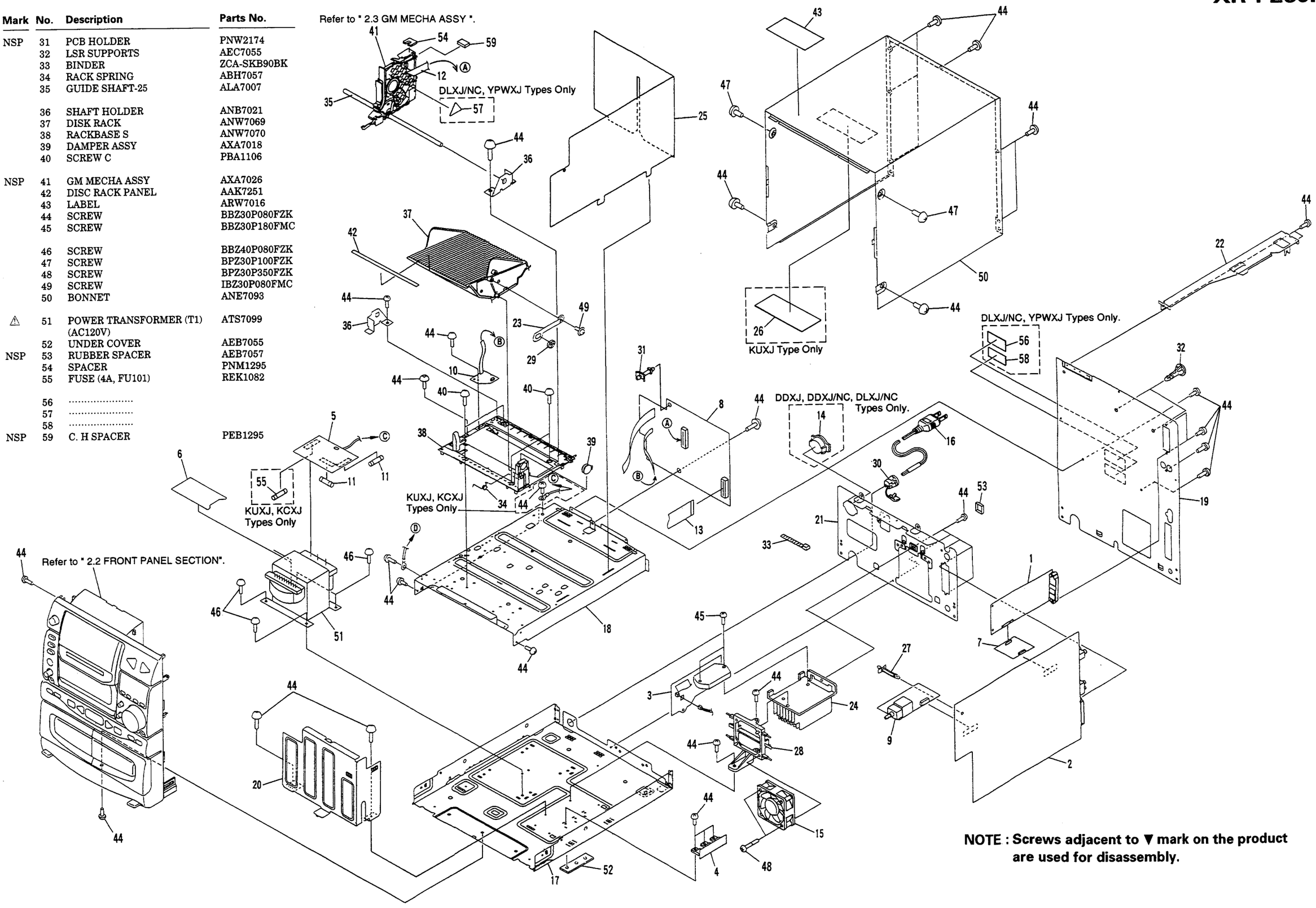
XR-P260F/KUXJ, KCXJ, DDXJ, DDXJ/NC, DLXJ/NC and YPWXJ have the same construction except for the following:

Mark	No.	Description	Part No.						Remarks
			KUXJ type	KCXJ type	DDXJ type	DDXJ/NC type	DLXJ/NC type	YPWXJ type	
	2	AF Assy	AWZ8232	AWZ8232	AWZ8234	AWZ8234	AWZ8234	AWZ8234	
	3	AMP Assy	AWZ8239	AWZ8239	AWZ8241	AWZ8241	AWZ8241	AWZ8241	
NSP	5	PRIMARY Assy	AWZ8248	AWZ8248	AWZ8250	AWZ8250	AWZ8346	AWZ8251	
NSP	6	SECONDARY Assy	AWZ8255	AWZ8255	AWZ8257	AWZ8257	AWZ8257	AWZ8257	
	8	GM-CD Assy	AWZ8263	AWZ8263	AWZ8265	AWZ8265	AWZ8265	AWZ8265	
	9	VR Assy	AWZ8270	AWZ8270	AWZ8272	AWZ8272	AWZ8272	AWZ8272	
⚠	11	Fuse (T1.25A, FU102)	Not used	Not used	AEK1055	AEK1055	AEK1055	Not used	
⚠	11	Fuse (T1.25A, FU103)	Not used	Not used	AEK1055	AEK1055	AEK1055	AEK1055	
⚠	14	Voltage Selector (S1)	Not used	Not used	AKX7002	AKX7002	AKX7002	Not used	
⚠	16	AC Power Cord	PDG1057	PDG1057	ADG1157	ADG1157	PDG1058	ADG1159	
	19	Rear Panel	ANC7305	ANC7306	ANC7307	ANC7308	ANC7309	ANC7310	
	26	65 Label	ORW1069	Not used	Not used	Not used	Not used	Not used	
⚠	30	Strain Relief	CM-22C	CM-22C	CM-22B	CM-22B	CM-22B	CM-22B	
⚠	51	Power Transformer (T1) (AC120V)	ATS7099	ATS7100	Not used	Not used	Not used	Not used	
⚠	51	Power Transformer (T1) (AC 110-127V/220-230V/240V)	Not used	Not used	ATS7101	ATS7101	ATS7101	Not used	
⚠	51	Power Transformer (T1) (AC 240V)	Not used	Not used	Not used	Not used	Not used	ATS7122	
⚠	55	Fuse (4A, FU101)	REK1082	REK1082	Not used	Not used	Not used	Not used	
NSP	56	Caution Label (F)	Not used	Not used	Not used	Not used	VRW-328	VRW-328	
	57	Caution Label (G)	Not used	Not used	Not used	Not used	VRW-329	VRW-329	
	58	Caution Label	Not used	Not used	Not used	Not used	PRW1018	PRW1018	

■ Parts List for XR-P260F/KUXJ

Mark	No.	Description	Parts No.
	1	FM/AM TUNER MODULE	AXQ3112
	2	AF ASSY	AWZ8232
	3	AMP ASSY	AWZ8239
	4	REG ASSY	AWZ8246
NSP	5	PRIMARY ASSY	AWZ8248
NSP	6	SECONDARY ASSY	AWZ8255
NSP	7	RELAY ASSY	AWZ8262
	8	GM-CD ASSY	AWZ8263
	9	VR ASSY	AWZ8270
NSP	10	HOME SW ASSY	AWZ8288
	11	.....	
	12	22P F.F.C/30V	ADD7016
	13	19P F.F.C/30V	ADD7022
	14	.....	
	15	DC FAN MOTOR	AXM7003
⚠	16	AC POWER CORD	PDG1057
NSP	17	CHASSIS	ANA7034
	18	SUB SHASSIS	ANA7038
	19	REAR PANEL	ANC7305
	20	FRONT STAY	AND7009
	21	REAR STAY	AND7010
	22	HOME LOCK STAY	AND7012
	23	LINK M	ANG7076
	24	HEAT SINK	ANH7033
	25	CD COVER	AAK7204
	26	65 LABEL	ORW1069
	27	SPACER	AEC7056
	28	MOLD A	AMR7005
	29	LINK HOLDER	AMR7087
⚠	30	STRAIN RELIEF	CM-22C

Mark	No.	Description	Parts No.
NSP	31	PCB HOLDER	PNW2174
	32	LSR SUPPORTS	AEC7055
	33	BINDER	ZCA-SKB90BK
	34	RACK SPRING	ABH7057
	35	GUIDE SHAFT-25	ALA7007
	36	SHAFT HOLDER	ANB7021
	37	DISK RACK	ANW7069
	38	RACKBASE S	ANW7070
	39	DAMPER ASSY	AXA7018
	40	SCREW C	PBA1106
NSP	41	GM MECHA ASSY	AXA7026
	42	DISC RACK PANEL	AAK7251
	43	LABEL	ARW7016
	44	SCREW	BBZ30P080FZK
	45	SCREW	BBZ30P180FMC
	46	SCREW	BBZ40P080FZK
	47	SCREW	BPZ30P100FZK
	48	SCREW	BPZ30P350FZK
	49	SCREW	IBZ30P080FMC
	50	BONNET	ANE7093
⚠	51	POWER TRANSFORMER (T1) (AC120V)	ATS7099
	52	UNDER COVER	AEB7055
NSP	53	RUBBER SPACER	AEB7057
	54	SPACER	PNM1295
	55	FUSE (4A, FU101)	REK1082
	56	.....	
	57	.....	
	58	.....	
NSP	59	C. H SPACER	PEB1295


Refer to " 2.3 GM MECHA ASSY ".
DLXJ/NC, YPWXJ Types Only
KUXJ Type Only
DDXJ, DDXJ/NC, DLXJ/NC Types Only.
DLXJ/NC, YPWXJ Types Only.
KUXJ, KCXJ Types Only
KUXJ, KCXJ Types Only
Refer to " 2.2 FRONT PANEL SECTION".

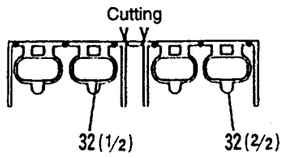
NOTE : Screws adjacent to ▼ mark on the product are used for disassembly.

XR-P260F

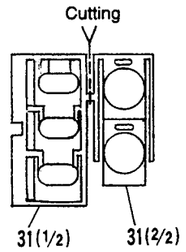
2.2 FRONT PANEL SECTION

Note 1. Cutting Position

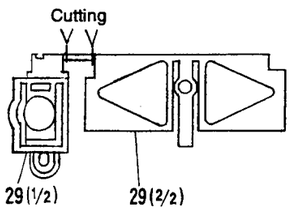
No. 32 (Control Button B)

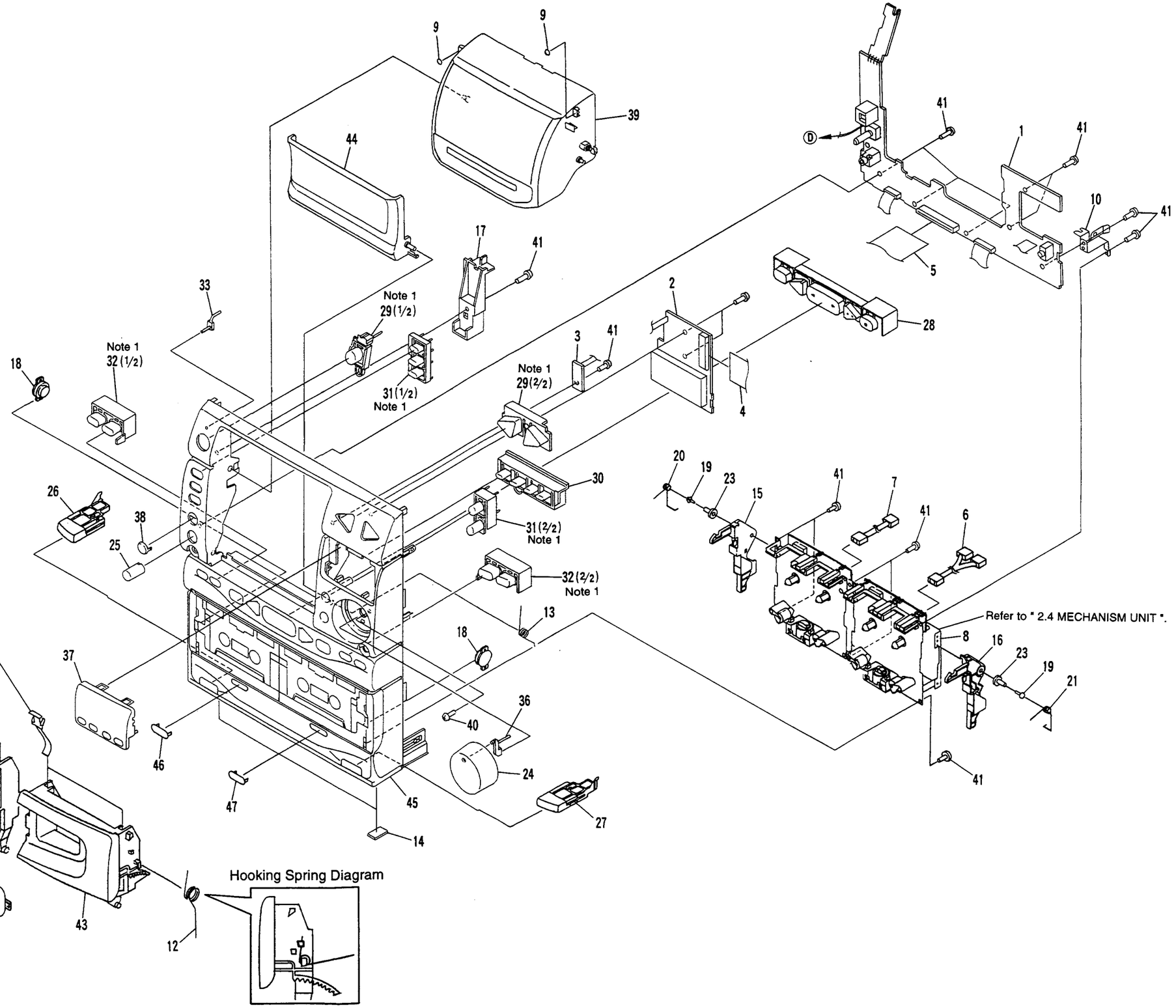


No. 31 (P. Bass Button)



No. 29 (DS Button)





■ Contrast of XR-P260F/KUXJ, KCXJ, DDXJ, DDXJ/NC, DLXJ/NC and YPWXJ

XR-P260F/KUXJ, KCXJ, DDXJ, DDXJ/NC, DLXJ/NC and YPWXJ have the same construction except for the following:

Mark	No.	Description	Part No.						Remarks
			KUXJ type	KCXJ type	DDXJ type	DDXJ/NC type	DLXJ/NC type	YPWXJ type	
	1	CONTROL Assy	AWZ8277	AWZ8277	AWZ8279	AWZ8279	AWZ8348	AWZ8279	
	2	DISPLAY Assy	AWZ8284	AWZ8284	AWZ8286	AWZ8286	AWZ8286	AWZ8286	

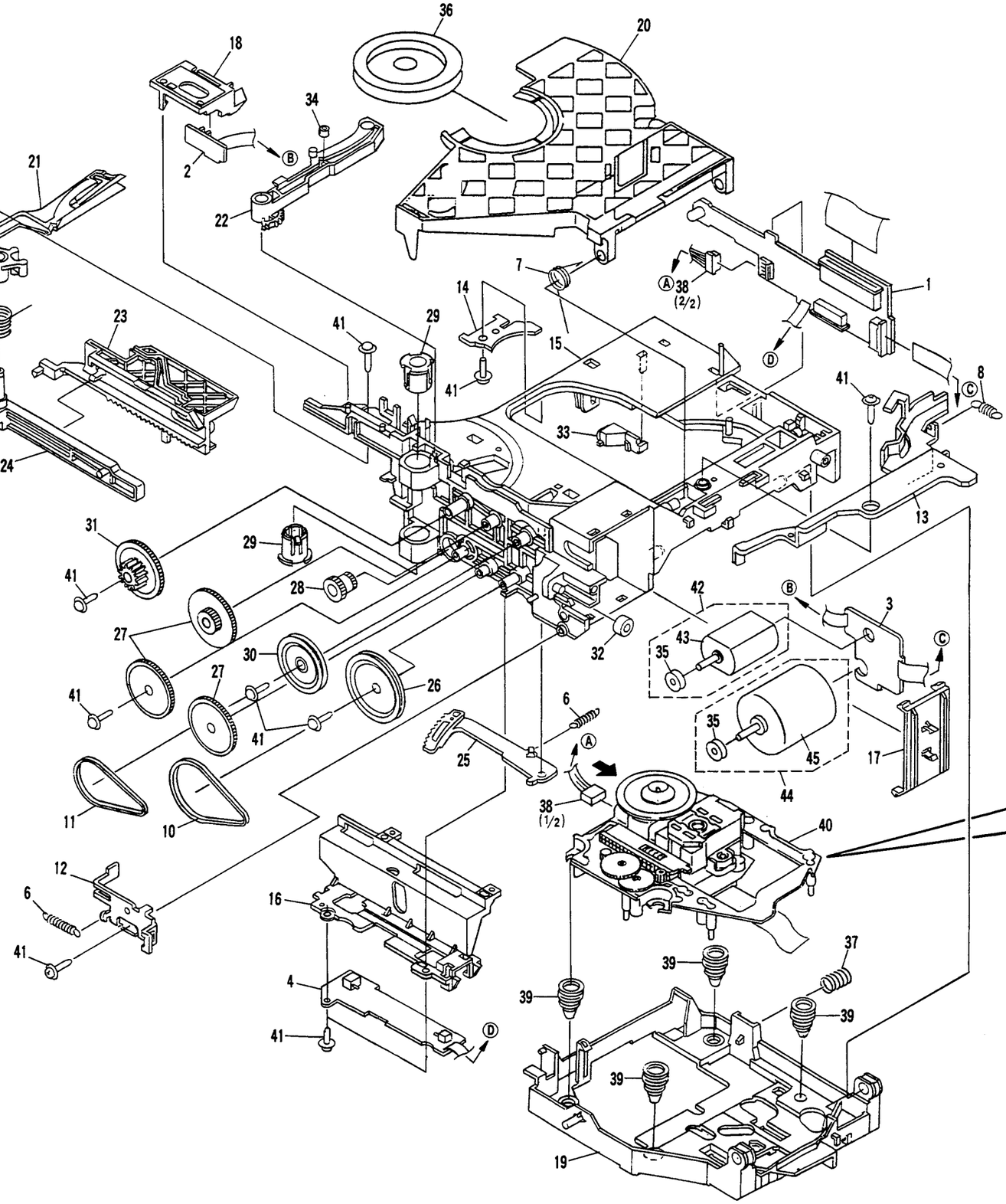
■ Parts List for XR-P260F/KUXJ

Mark	No.	Description	Parts No.
	1	CONTROL ASSY	AWZ8277
	2	DISPLAY ASSY	AWZ8284
NSP	3	HOOD SW ASSY	AWZ8290
	4	28P F.F.C/30V	ADD7021
	5	35P F.F.C/30V	ADD7023
	6	CONNECTOR 5P	RKP1682
	7	CONNECTOR 3P	RKP1683
	8	MECHANISM UNIT	RYM1248
	9	RUBBER SHEET	AEB7054
	10	GND HOLDER	ANG7072
	11	DOOR SPLING L	ABH7084
	12	DOOR SPLING R	ABH7085
	13	DOOR M SPRING	ABH7090
	14	RUBBER SHEET	AEB1111
	15	EJECT ARM (L)	AMR7074
	16	EJECT ARM (R)	AMR7075
	17	PCB MOLD	AMR7081
	18	DAMPER ASSY	AXA7021
	19	SCREW	BSZ20P120FMC
	20	EJECT SPRING (L)	ABH7102
	21	EJECT SPRING (R)	ABH7103
	22	SPRING	RBK1004
	23	COLLAR	RNK2135
	24	VOLUME KNOB	AAB7069
	25	MIC VOLUME KNOB	AAB7070
	26	EJECT BUTTON L	AAD7223
	27	EJECT BUTTON R	AAD7224
	28	CONTROL BUTTON A	AAD7237
	29	DS BUTTON	AAD7251
	30	MODE BUTTON	AAD7252
	31	P. BASS BUTTON	AAD7253
	32	CONTROL BUTTON B	AAD7254
	33	STA. LENS	AAK7210
	34	DOOR WINDOW L	AAK7211
	35	DOOR WINDOW R	AAK7267
	36	VOL. LENS	AAK7214
	37	DISPLAY LENS	AAK7217
	38	RC LENS	AAK7218
	39	HOOD M	AAN7100
	40	SCREW	BBZ30P080FZK
	41	SCREW	BPZ30P080FMC
	42	DOOR PANEL L	AAN7128
	43	DOOR PANEL R	AAN7129
	44	DOOR M	AAN7115
	45	FRONT PANEL	AMB7319
	46	BLIND MOLD L	AMR7100
	47	BLIND MOLD R	AMR7101

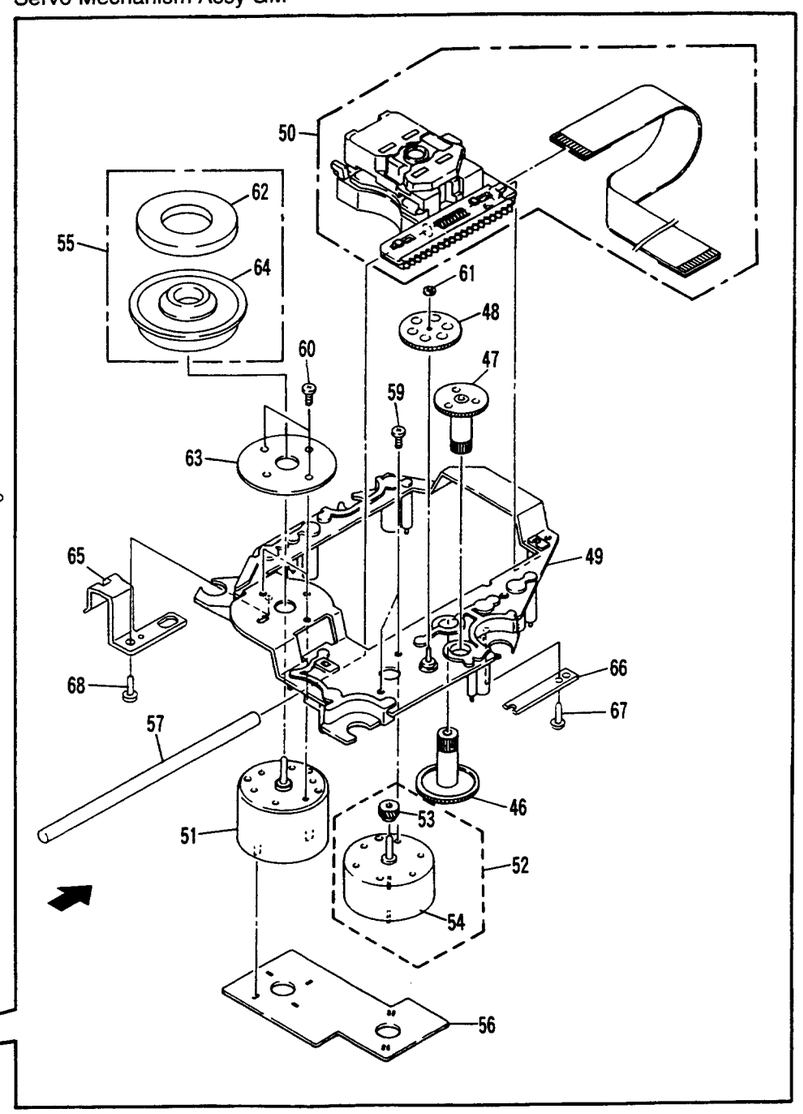
2.3 GM MECHA ASSY

Mark	No.	Description	Parts No.
NSP	1	MECHA PCB ASSY	AWZ7835
NSP	2	SENSOR PCB ASSY	AWZ7836
NSP	3	MOTOR PCB ASSY	AWZ7837
NSP	4	SW PCB ASSY	AWZ7838
	5	ARM A SPRING	ABH7050
	6	GEAR PLATE SPRING	ABH7051
	7	CLAMP SPRING	ABH7107
	8	LOCK LEVER SPRING	ABH7120
	9	.....	
	10	LOADING BELT	AEB7029
	11	BELT	AEB7030
NSP	12	LOCK ANGLE	ANB7027
NSP	13	LOCK LEVER P	ANB7042
NSP	14	SERVO STOPPER S	ANB7047
	15	LOADING BASE	ANW7051
	16	CAM COVER	ANW7052
	17	MOTOR HOLDER	ANW7053
	18	SENSOR HOLDER	ANW7054
	19	FLOAT BASE	ANW7055
	20	CLAMPER HOLDER	ANW7084
	21	ARM (A)	ANW7057
	22	ARM (B)	ANW7058
	23	DRIVE PLATE	ANW7059
	24	ARM PLATE	ANW7060
	25	GEAR PLATE	ANW7082
	26	GEAR PULLEY (B)	ANW7062
	27	GEAR A	ANW7063
	28	DRIVE GEAR	ANW7064
	29	BEARING	ANW7065
	30	GEAR PULLEY A	ANW7066
	31	SELECT GEAR	ANW7067
	32	ROLLER	ANW7068
	33	LED LENS	ANW7072
	34	ROLLER B	ANW7075
	35	MOTOR PULLEY	PNW1634
	36	CLAMPER	ANW7085
	37	FLOAT SPRING	ABH7049
	38	CONNECTOR ASSY (4P)	ADE7006
	39	FLOAT RUBBER	AEB7059
NSP	40	SERVO MECHANISM ASSY GM	AXA7028
	41	SCREW	IPZ20P080FMC
	42	MOTOR ASSY (SELECT)	AEA7005
NSP	43	MOTOR	PXM1002
	44	MOTOR ASSY	AEA7006
	45	LOADING MOTOR	VXM1034
	46	GEAR 1	PNW2052
	47	GEAR 2	PNW2053
	48	GEAR 3	PNW2054
	49	CARRIAGE BASE	PNW2445
	50	PICKUP ASSY	AEA7004

Mark	No.	Description	Parts No.
	51	D.C. MOTOR ASSY (SPINDLE)	PEA1235
	52	CARRIAGE DC MOTOR ASSY	PEA1246
	53	PINION GEAR	PNW2055
NSP	54	CARRIAGE DC MOTOR/0.3W	PXM1027
	55	DISC TABLE ASSY	PEA1314
NSP	56	MECHANISM BOARD ASSY	PWX1192
	57	GUIDE BAR	PLA1094
	58	.....	
	59	SCREW	JFZ17P025FZK
	60	SCREW	JFZ20P040FMC
	61	WASHER	WT12D032D025
	62	CLAMP MAGNET	PMF1014
	63	YOKE M	PNB1312
NSP	64	DISC TABLE	PNW2410
NSP	65	FLOAT ANGLE	ANB7020
	66	GEAR STOPPER	PNB1303
	67	SCREW	BPZ20P060FMC
	68	SCREW	BPZ26P100FMC
	69	.....	
		FROIL (for service)	GYA1001
		HA NARL (for service)	GEM1016



Servo Mechanism Assy GM

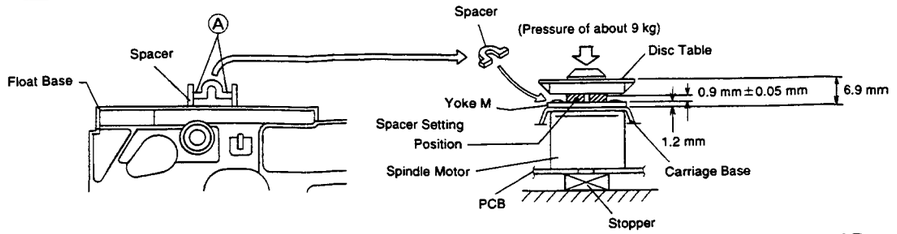


● How to install the disc table

1 Use nipper or other tool to cut the two sections marked Ⓐ figure 1.
Then remove the spacer.

2 While supporting the spindle motor shaft with the stopper, put spacer on top of the yoke M, and stick the disc table on top (takes about 9kg pressure). Take off the spacer.

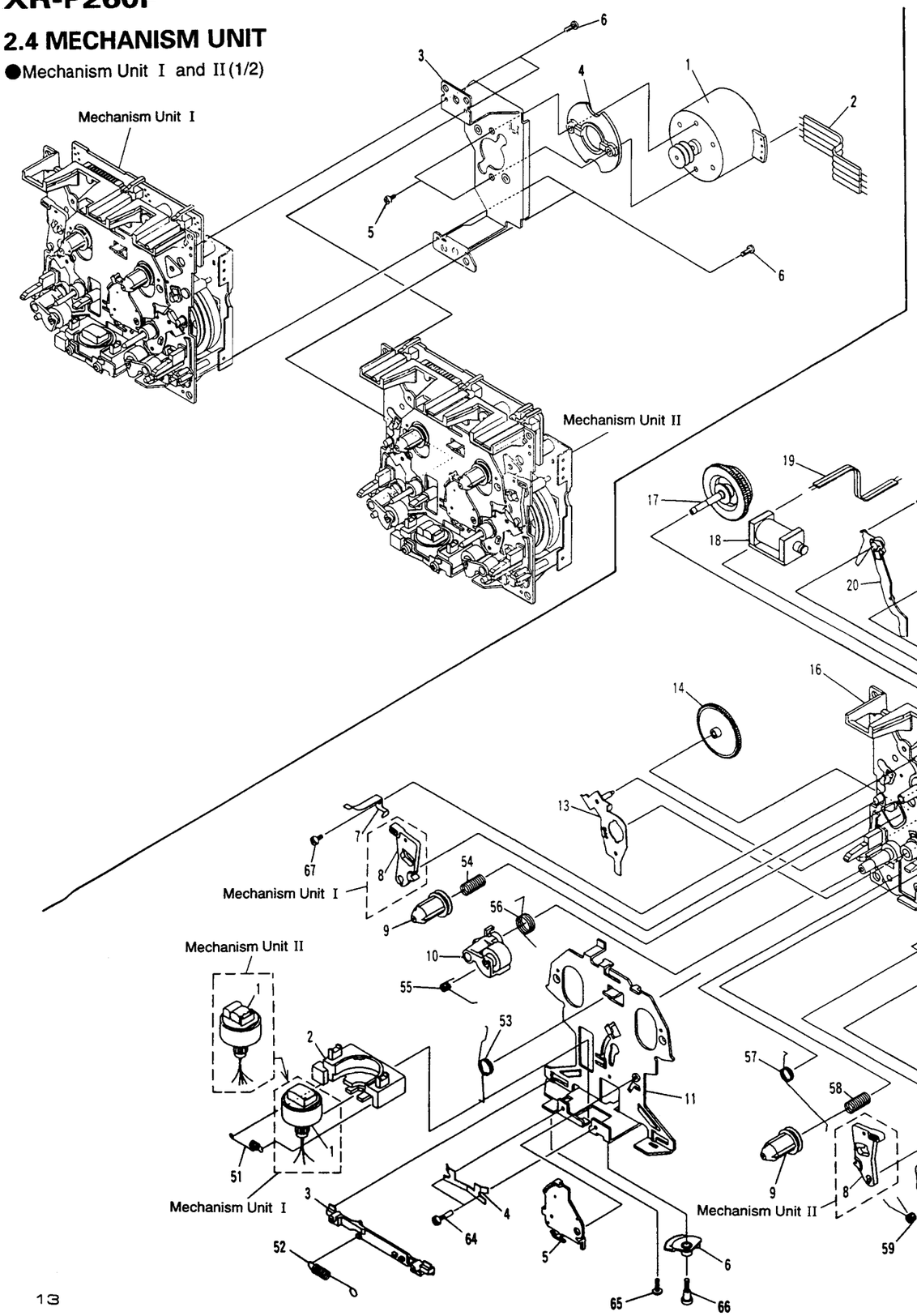
1 2



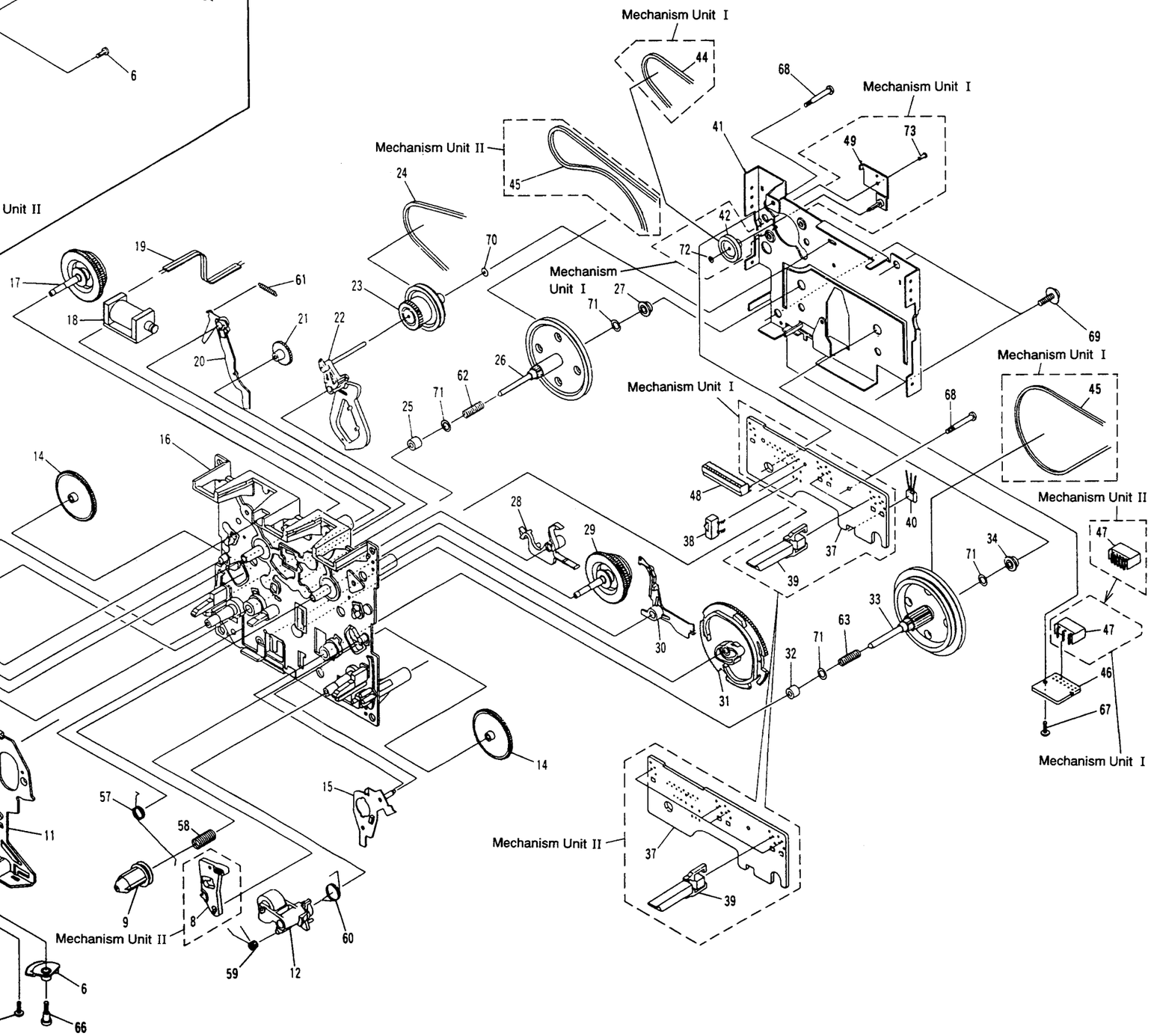
XR-P260F

2.4 MECHANISM UNIT

●Mechanism Unit I and II (1/2)



●Mechanism Unit I and II (2/2)


Mechanism Unit I
Mechanism Unit II
Mechanism Unit I
Mechanism Unit I
Mechanism Unit I
Mechanism Unit II
Mechanism Unit I
Mechanism Unit II
Mechanism Unit I
Mechanism Unit II

■ Mechanism unit I and II (1/2)

Mark	No.	Description	Parts No.
	1	ASSY MOTOR	RXM1080
NSP	2	JUMPER WIRE	RDD1012
	3	BRACKET MOTOR	RNE1830
	4	SPACER	RNK1822
	5	SCREW	RBA1100
	6	SCREW	PCZ20P040FMC

■ Mechanism unit I and II (2/2)

Mark	No.	Description	Parts No.
	1	ASSY HOLDER HEAD (*1)	RXA1400
	1	ASSY HOLDER HEAD (*2)	RXA1664
	2	FRAME HEAD	RNK1715
	3	LEVER HEAD	RNK1716
	4	SPRING AZIMUTH	RBK1006
	5	ASSY ARM ASSIST	RXA1401
	6	GEAR ARM HEAD	RNK1717
	7	SPRING CASSETTE	RBK1039
	8	EJECT LOCK	RNK1718
	9	CAP REEL	RNK1719
	10	ASSY PINCH ARM L	RXA1403
	11	CHASSIS HEAD	RNE1437
	12	ASSY PINCH ARM R	RXA1404
	13	ARM PLAY L	RNK1866
	14	GEAR PLAY	RNK1867
	15	ARM PLAY R	RNK1868
	16	CHASSIS OS	RXA1411
	17	ASSY SUB REEL L	RXA1407
	18	SOLENOID	RXP1020
	19	WIRE	RDC1006
	20	ARM RVS	RNK1721
	21	GEAR FF	RNK1723
	22	ASSY ARM FR	RXA1412
	23	ASSY PULLEY FR	RXA1413
	24	BELT FR	REB1292
	25	METAL	RNG1048
	26	ASSY FLYWHEEL L	RXA1690
	27	METAL	RNG1005
	28	ARM BRAKE	RNK1724
	29	ASSY SUB REEL R	RXA1408
	30	ARM TRIGER	RNK1722
	31	GEAR CAM	RNK1725
	32	METAL	RNG1049
	33	ASSY FLYWHEEL R	RXA1691
	34	METAL	RNG1004
	35	.....	
	36	.....	
	37	P. C. BOARD	RNP1610
	38	SWITCH MODE	RSN1020
	39	SWITCH (LEAF)	RSN1019
	40	HALL IC	DN6851A
	41	BRACKET FW (*1)	RNE1854
	41	BRACKET FW (*2)	RNE1438
	42	PULLEY (*1 only)	RNK2132
	43	.....	
	44	BELT FW (*1 only)	REB1291
	45	BELT MAIN (* 1)	REB1290
	45	BELT MAIN (* 2)	REB1289
	46	P. C. BOARD	RNP1348
	47	HOUSING (*1)	RKP1396
	47	HOUSING (*2)	RKP1397
	48	CONNECTOR (*1)	RKP1713
	48	CONNECTOR (*2)	RKP1714
	49	ASSY HOLDER (*1 only)	RXA1689
	50	.....	
	51	SPRING	RBH1282
	52	SPRING	RBH1283
	53	SPRING	RBH1284
	54	SPRING	RBH1286
	55	SPRING	RBH1288
	56	SPRING	RBH1291
	57	SPRING	RBH1285
	58	SPRING	RBH1287
	59	SPRING	RBH1289
	60	SPRING	RBH1290
	61	SPRING	RBH1292
	62	FWP SP (SPRING)	RBH1061
	63	SPRING	RBH1325
	64	SCREW (For AZIMUTH)	RBA1023
	65	SCREW	RBA1027
	66	SCREW	RBA1030
	67	SCREW	PCZ20P040FMC
	68	SCREW	RBA1093
	69	SCREW	RBA1094
	70	WASHER	RBF1046
	71	WASHER	WA26D047D013
	72	WASHER (*1 only)	WT13D030D025
	73	SCREW (*1 only)	RBA1118

*Note) *1: Mechanism Unit I*
2: Mechanism Unit II

2.5 PACKING

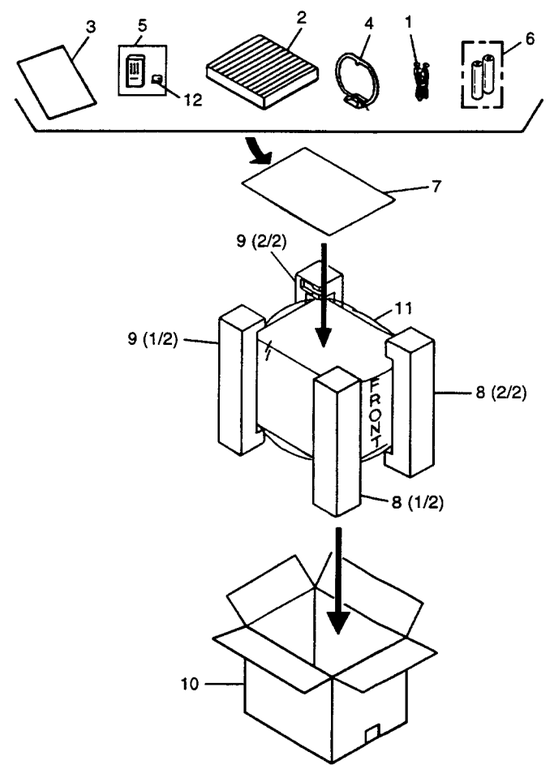
■ Contrast of XR-P260F/KUXJ, KCXJ, DDXJ, DDXJ/NC, DLXJ/NC and YPWXJ

XR-P260F/KUXJ, KCXJ, DDXJ, DDXJ/NC, DLXJ/NC and YPWXJ have the same construction except for the following:

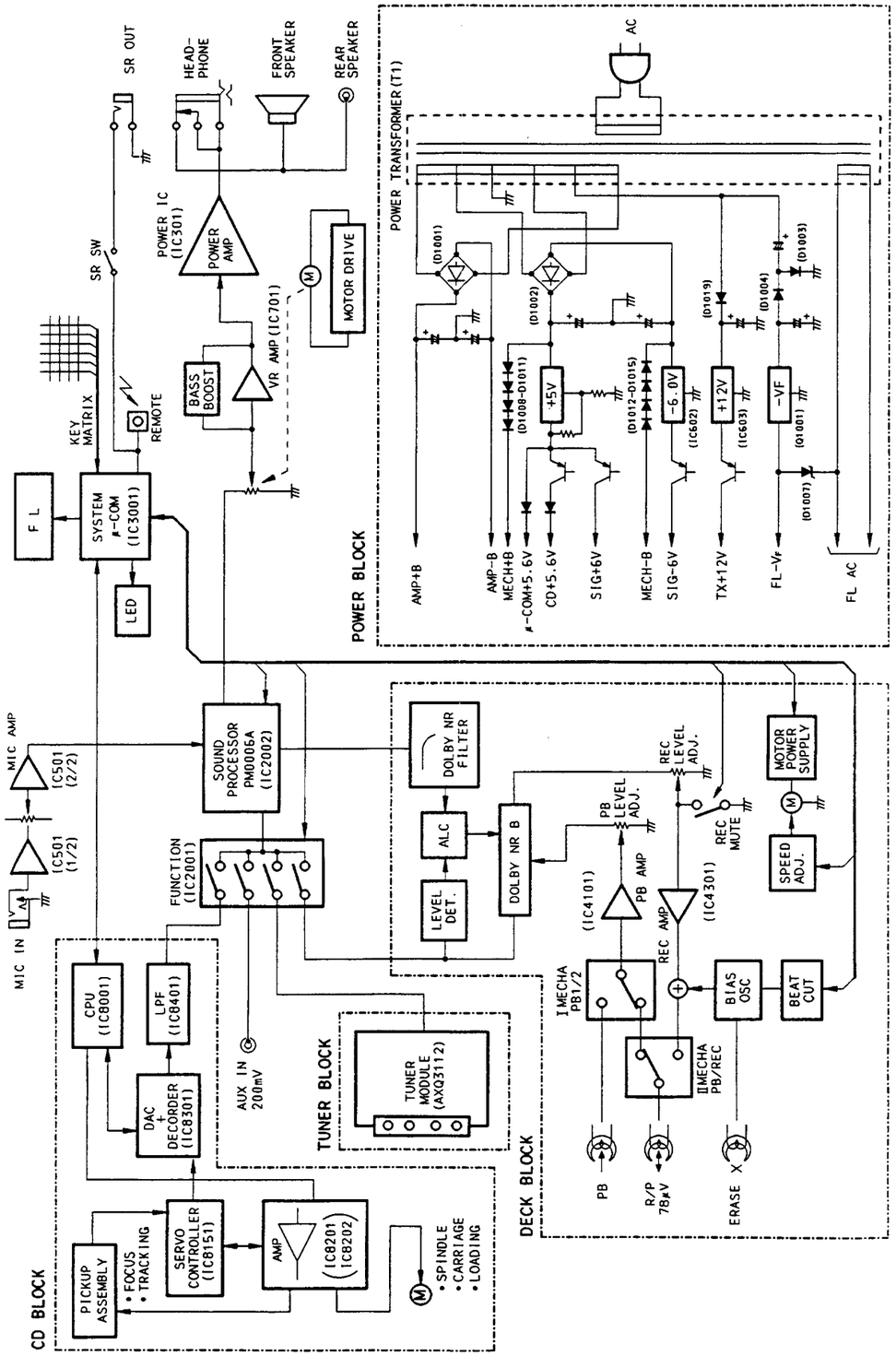
Mark	No.	Description	Part No.						Remarks
			KUXJ type	KCXJ type	DDXJ type	DDXJ/NC type	DLXJ/NC type	YPWXJ type	
	3	Operating Instructions (French)	Not used	ARC7086	Not used	Not used	Not used	Not used	
	3	Operating Instructions (English/Spanish/Chinese)	Not used	Not used	ARE7055	ARE7055	ARE7055	Not used	
	3	Operating Instructions (English)	ARB7056	ARB7056	Not used	Not used	Not used	ARB7056	
NSP	7	Polyethylene Bag	AHG7030	AHG7032	AHG7032	AHG7032	AHG7032	AHG7032	
	10	Packing Case	AHD7233	AHD7233	AHD7234	AHD7235	AHD7235	AHH7236	

■ Parts List for XR-P260F/KUXJ

Mark	No.	Description	Parts No.
	1	FM ANTENNA	ADH1017
	2	CD CASE RACK	AMR7072
	3	OPERATING INSTRUCTIONS (English)	ARB7056
	4	LOOP ANTENNA	ATB7004
	5	REMOTE CONTROL UNIT (CU-XR021)	AXD7077
NSP	6	BATTERY (R6P, AA)	VEM-013
NSP	7	POLYETHYLENE BAG	AHG7030
	8	FRONT PAD LR	AHA7098
	9	REAR PAD LR	AHA7099
	10	PACKING CASE	AHD7233
	11	PACKING SHEET	AHG7003
	12	BATTERY COVER	AZA7123

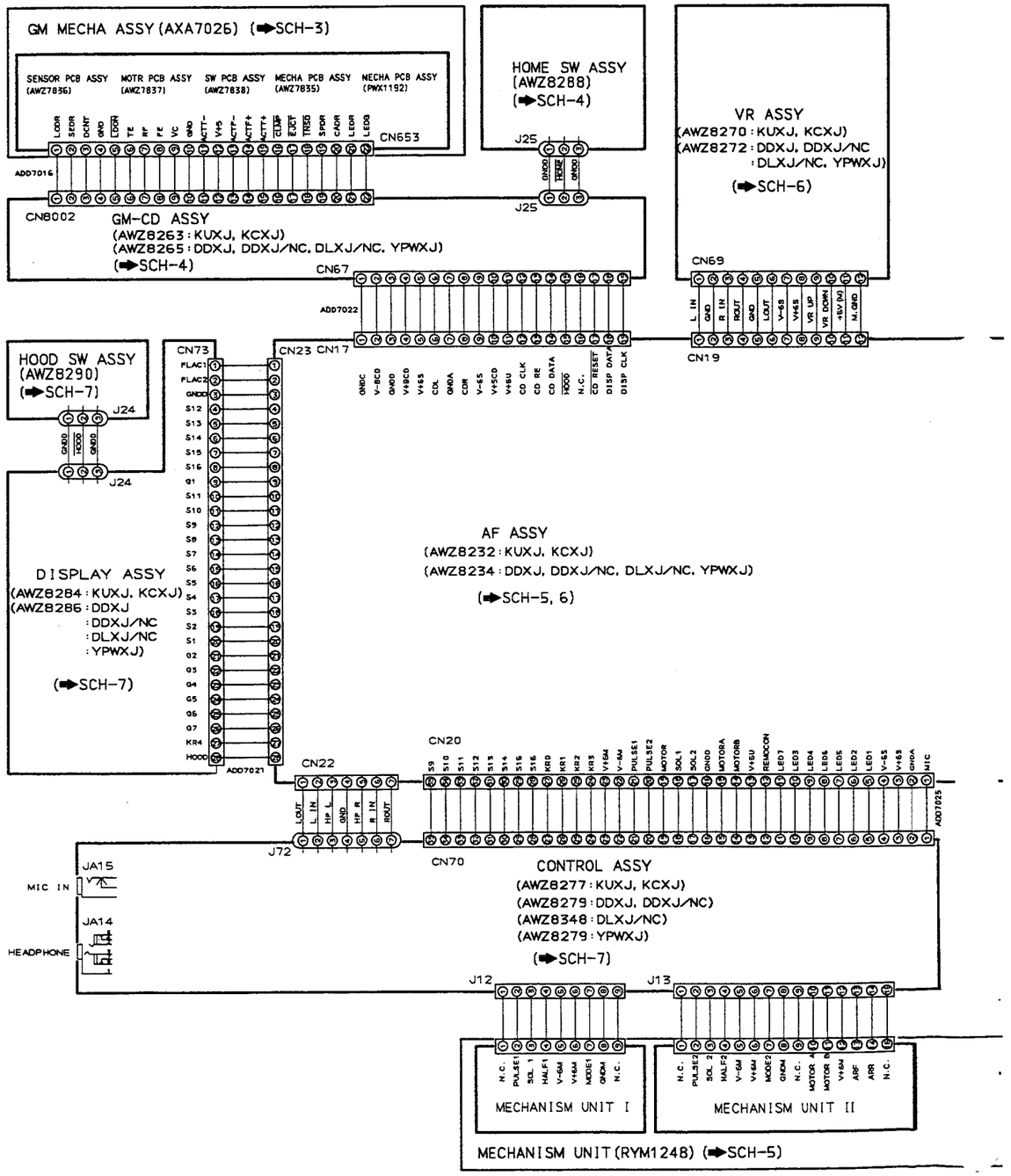


3. BLOCK DIAGRAM

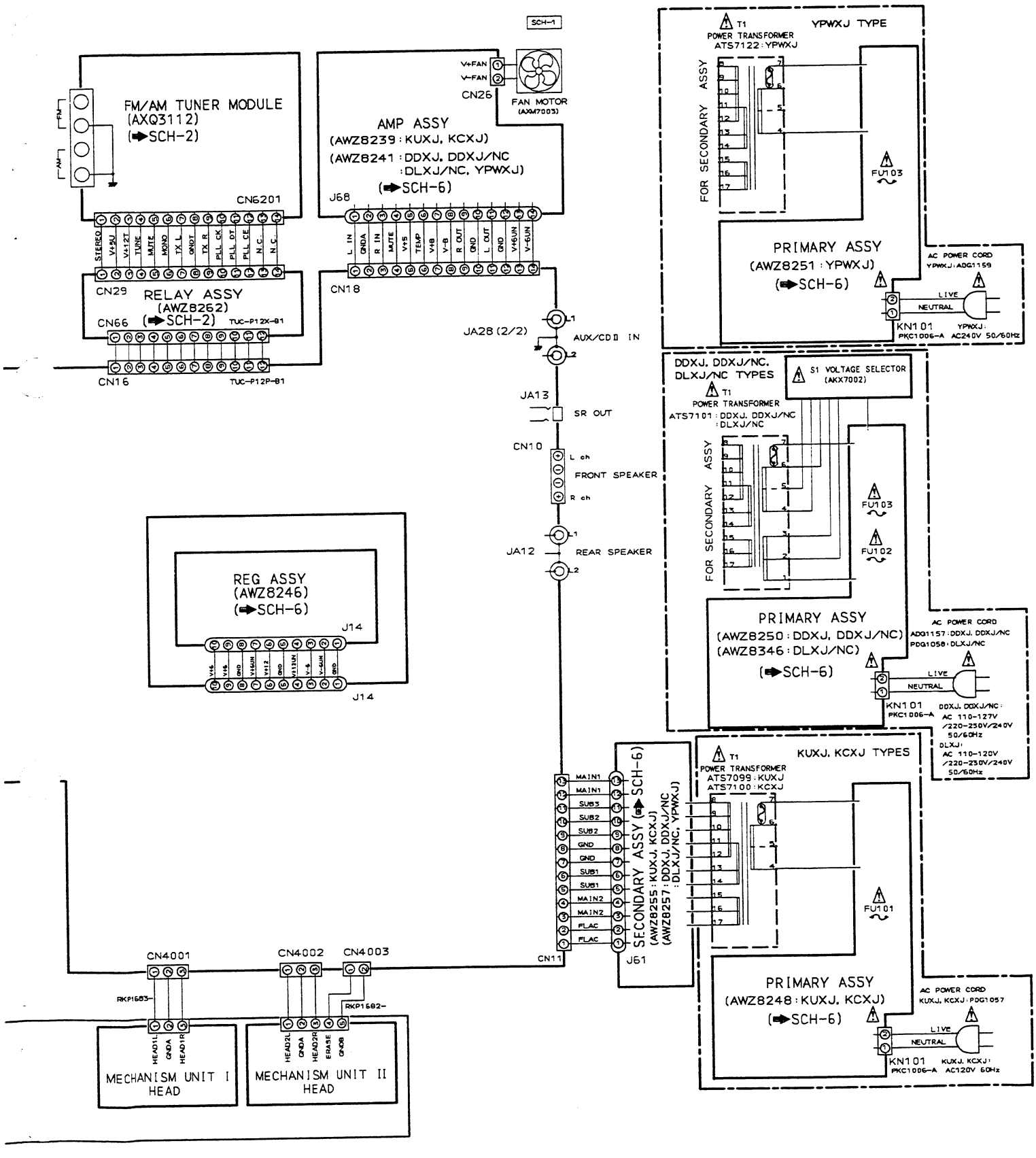


4. SCHEMATIC AND PCB CONNECTION DIAGRAMS

4.1 OVERALL SCHEMATIC DIAGRAM



SCH-1 OVERALL SCHEMATIC DIAGRAM

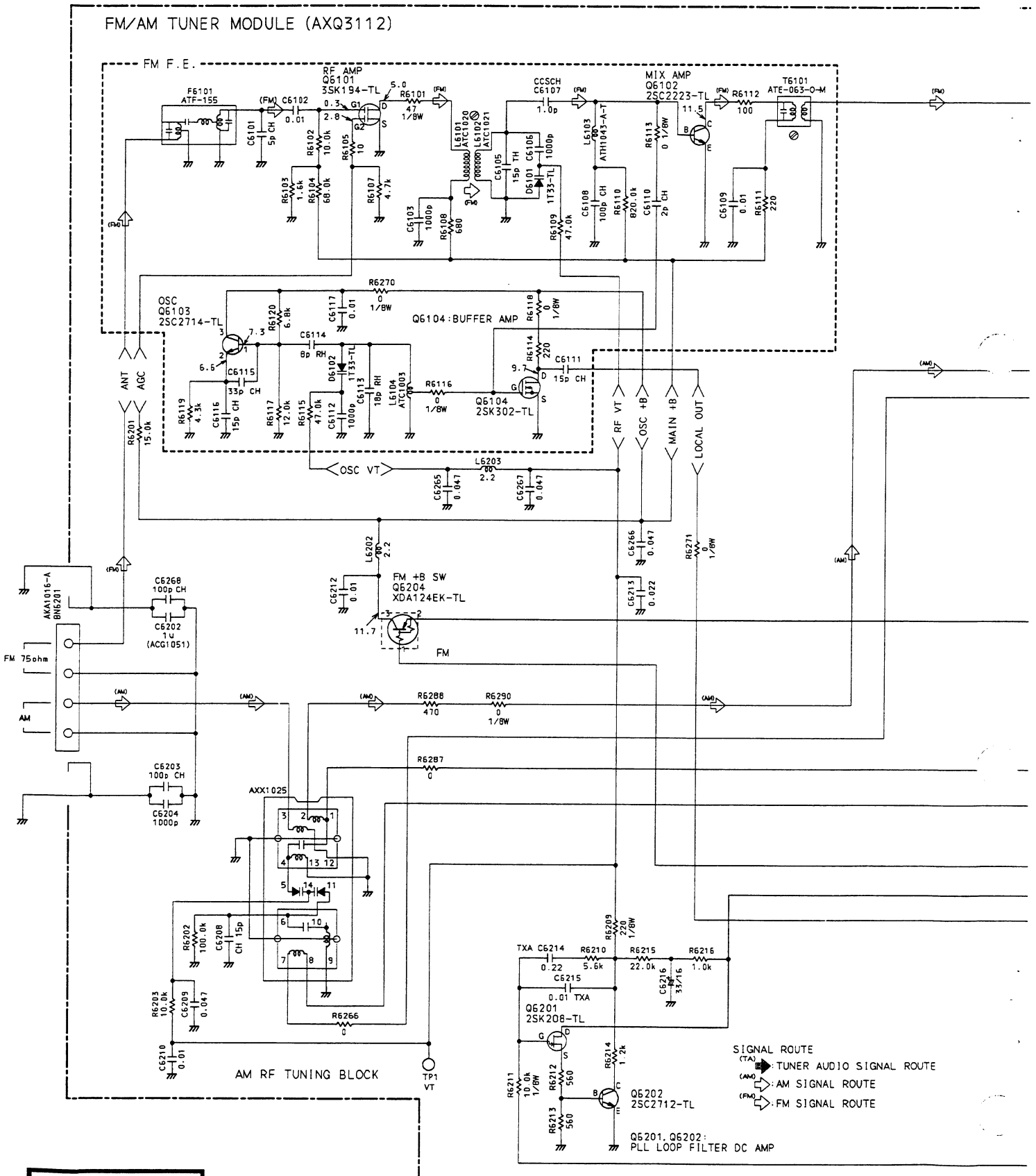


SCH-1

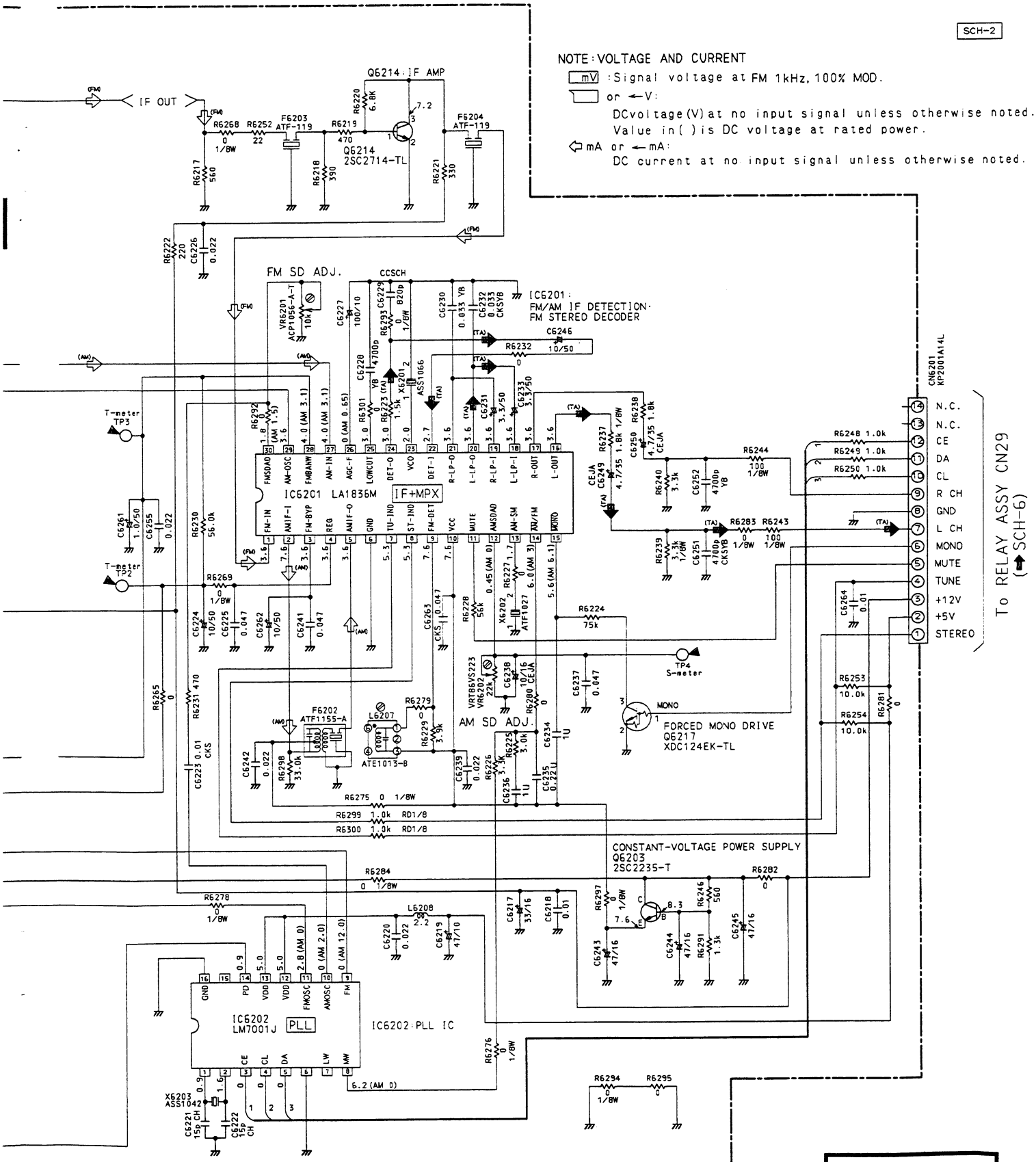
OVERALL SCHEMATIC DIAGRAM

XR-P260F

4.2 FM/AM TUNER MODULE

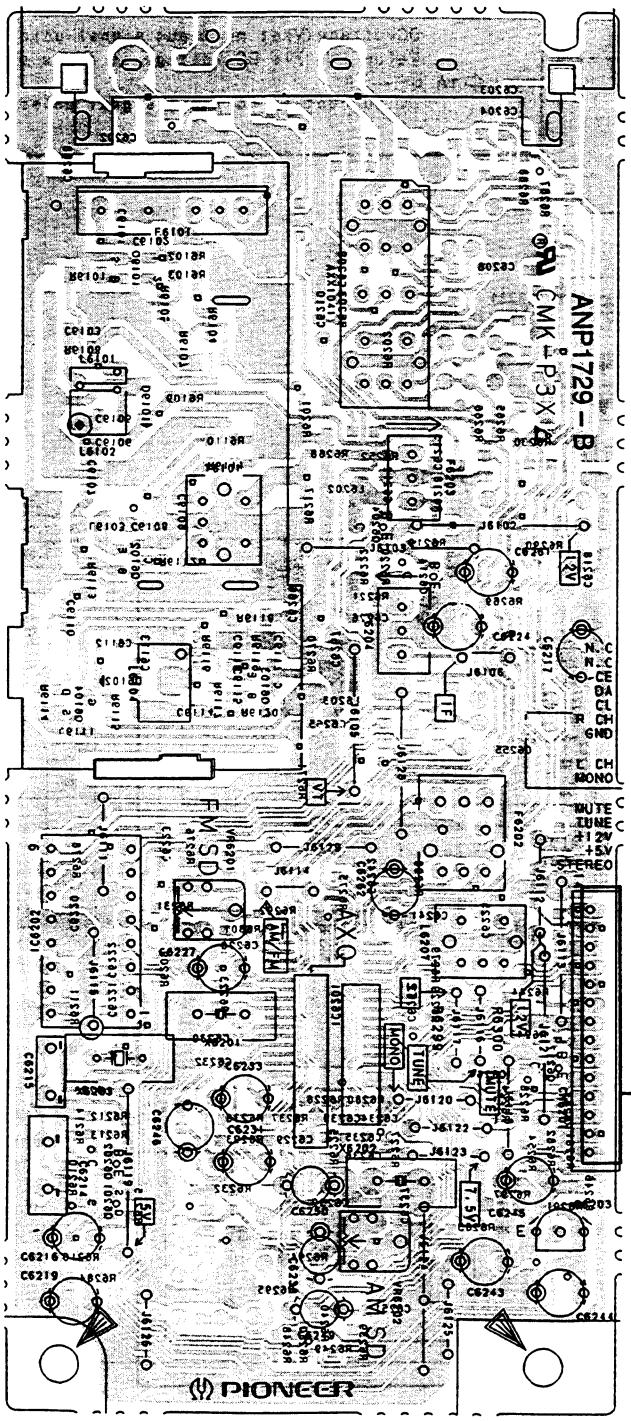


SCH-2


SCH-2
NOTE : VOLTAGE AND CURRENT
mV : Signal voltage at FM 1kHz, 100% MOD.
or ←V:
DC voltage (V) at no input signal unless otherwise noted.
Value in ( ) is DC voltage at rated power.
⇦mA or ←mA:
DC current at no input signal unless otherwise noted.
Q6214 : IF AMP
Q6214
2SC2714-TL
IF OUT
F6203 ATF-119
F6204 ATF-119
FM SD ADJ.
IC6201 : FM/AM IF DETECTION· FM STEREO DECODER
IC6201 LA1836M
IF+MPX
AM SD ADJ.
F6202 ATF1155-A
ATE1013-B
FORCED MONO DRIVE
Q6217
XDC124EK-TL
CONSTANT-VOLTAGE POWER SUPPLY
Q6203
2SC2235-T
IC6202
LM7001J
PLL
IC6202 : PLL IC
CN6201 KP2001A14L
N.C.
N.C.
CE
DA
CL
R CH
GND
L CH
MONO
MUTE
TUNE
+12V
+5V
STEREO
To RELAY ASSY CN29 (SCH-6)
T-meter TP3
T-meter TP2
TP4 S-meter

PCB–1

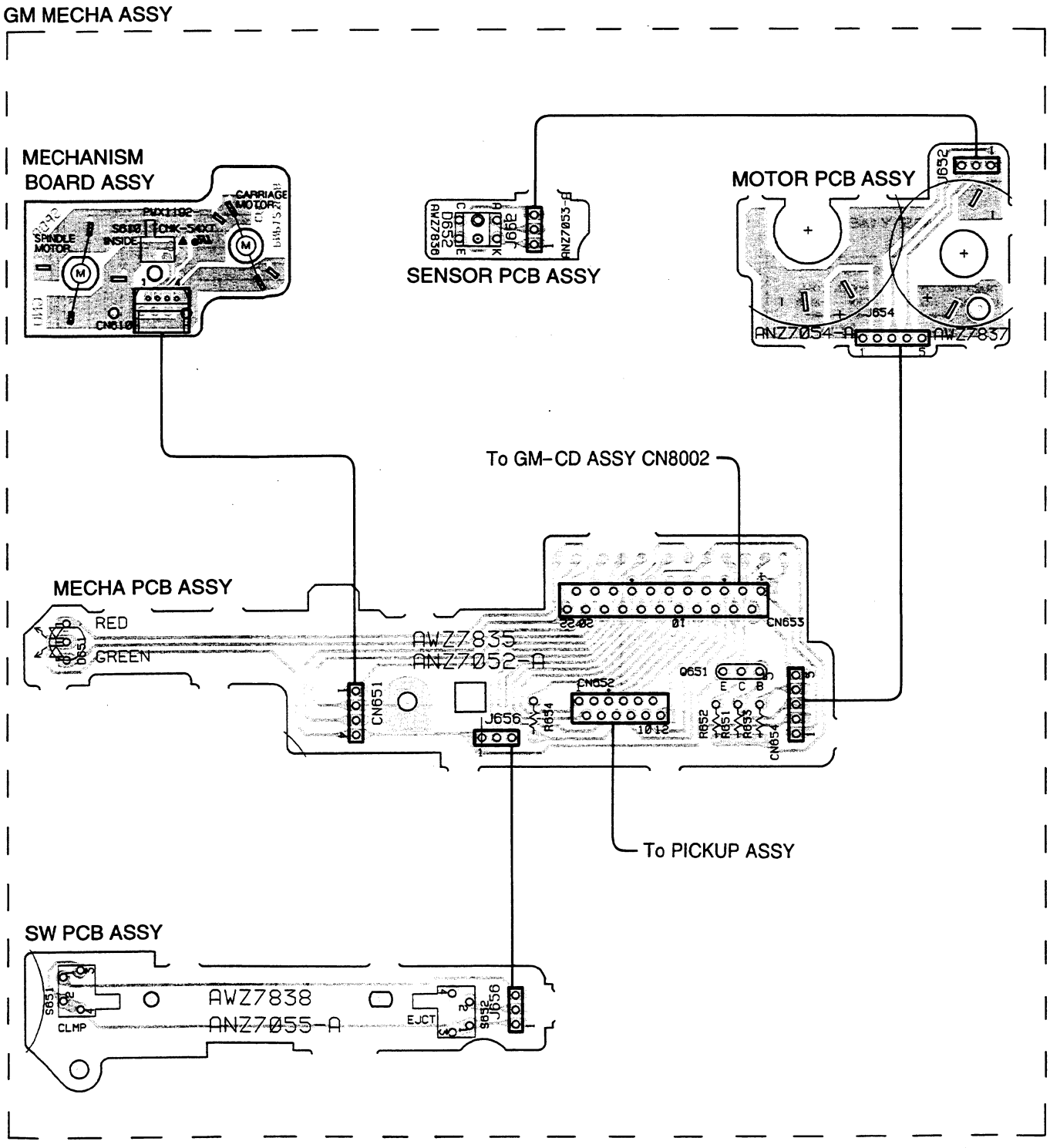
FM/AM TUNER MODULE



● This diagram is viewed from the mounted parts side.

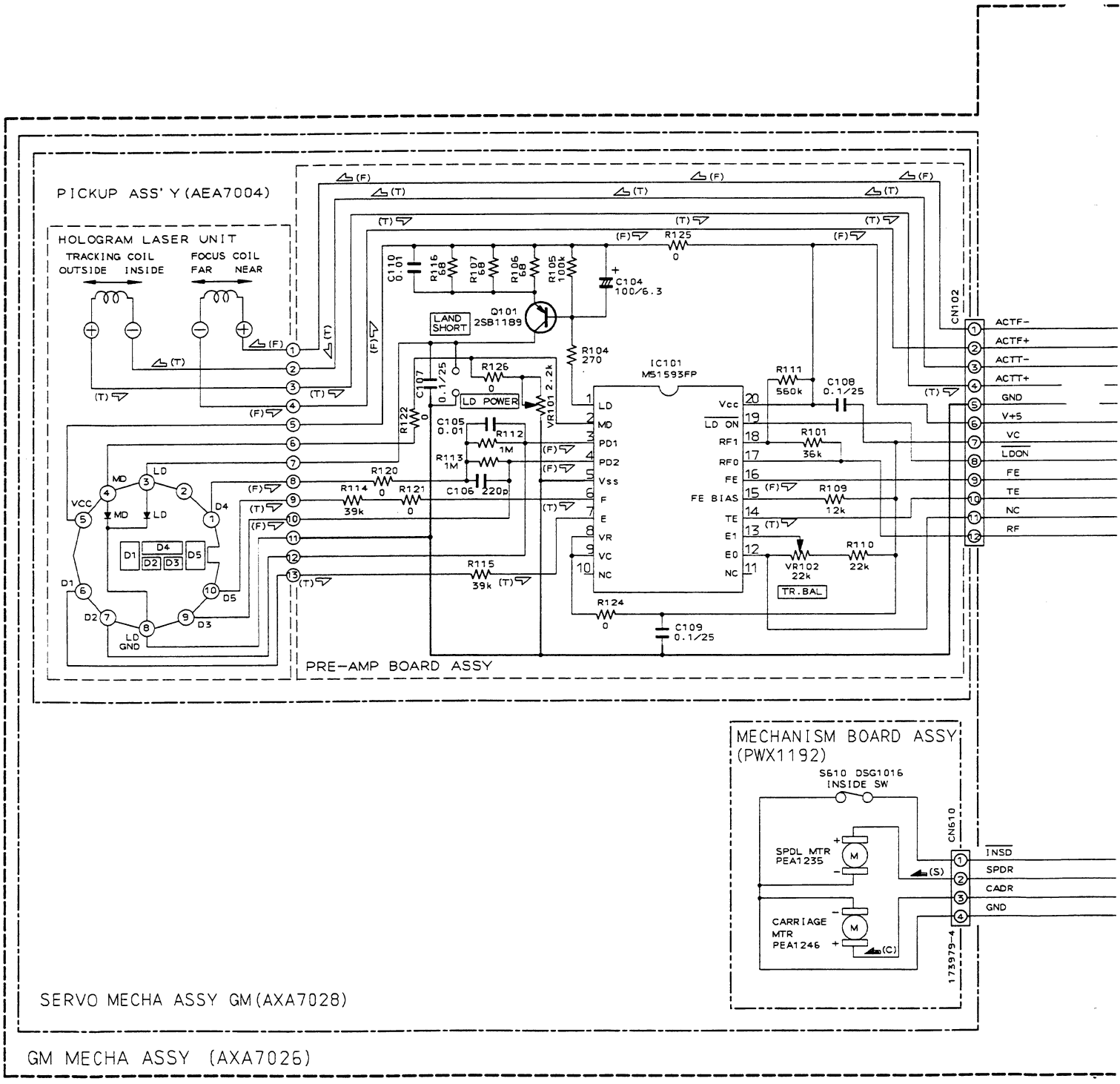
4.3 GM MECHA ASSY

PCB-2



The parts mounted on this PCB include all necessary parts for several destinations.
For further information for respective destinations, be sure to check with the schematic diagram.

- This diagram is viewed from the mounted parts side.



SIGNAL ROUTE

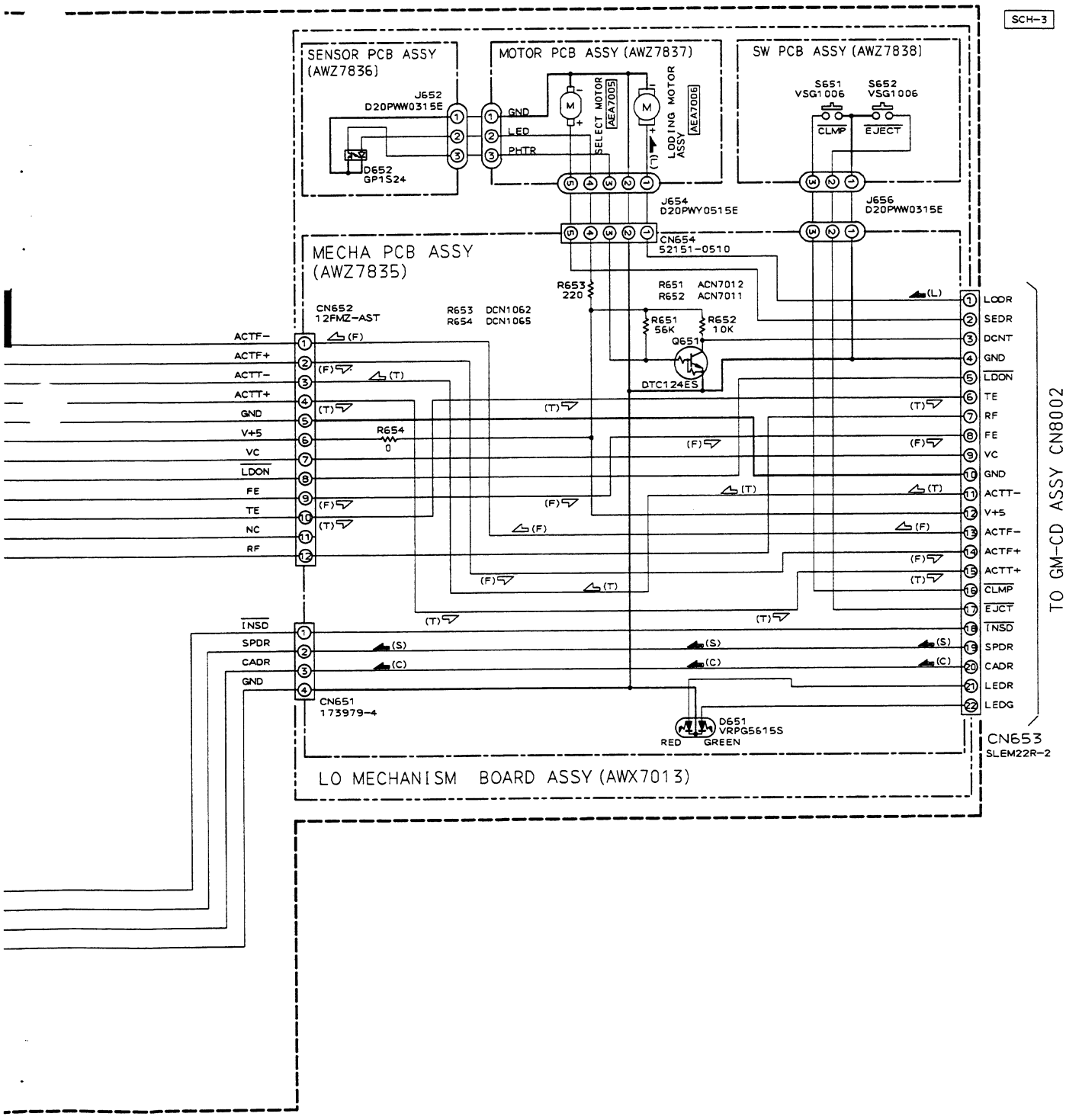
(F) : FOCUS SERVO LOOP LINE

(T) : TRACKING SERVO LOOP LINE

(L) : LOADING MOTOR ROUTE

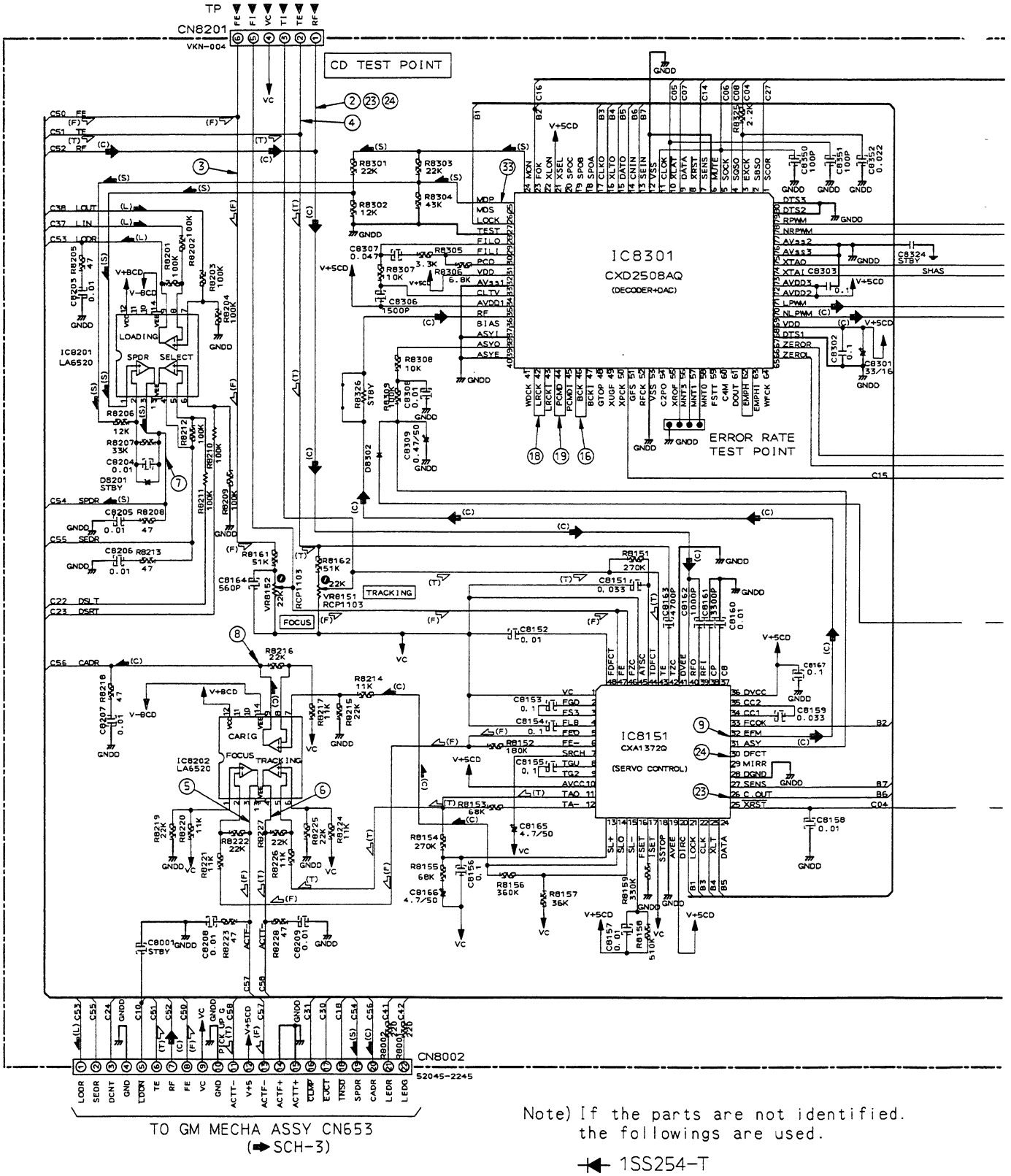
(S) : SPINDLE MOTOR ROUTE

(C) : CARRIAGE MOTOR ROUTE


SCH-3
SENSOR PCB ASSY (AWZ7836)
J652 D20PWW0315E
D652 GP1S24
MOTOR PCB ASSY (AWZ7837)
SELECT MOTOR AEA7005
LOADING MOTOR ASSY AEA7006
GND
LED
PHTR
SW PCB ASSY (AWZ7838)
S651 VSG1006
S652 VSG1006
CLMP
EJECT
J654 D20PWY0515E
J656 D20PWW0315E
CN654 52151-0510
MECHA PCB ASSY (AWZ7835)
CN652 12FMZ-AST
R653 DCN1062
R654 DCN1065
R653 220
R651 ACN7012
R652 ACN7011
R651 56K
R652 10K
Q651
DTC124ES
R654 0
ACTF−
ACTF+
ACTT−
ACTT+
GND
V+5
VC
LDON
FE
TE
NC
RF
LODR
SEDR
DCNT
GND
LDON
TE
RF
FE
VC
GND
ACTT−
V+5
ACTF−
ACTF+
ACTT+
CLMP
EJCT
INSD
SPDR
CADR
LEDR
LEDG
INSD
SPDR
CADR
GND
CN651 173979-4
D651 VRPG5615S
RED
GREEN
CN653 SLEM22R-2
TO GM-CD ASSY CN8002 (SCH-4)
LO MECHANISM BOARD ASSY (AWX7013)

XR-P260F

4.4 GM-CD ASSY AND HOME SW ASSY

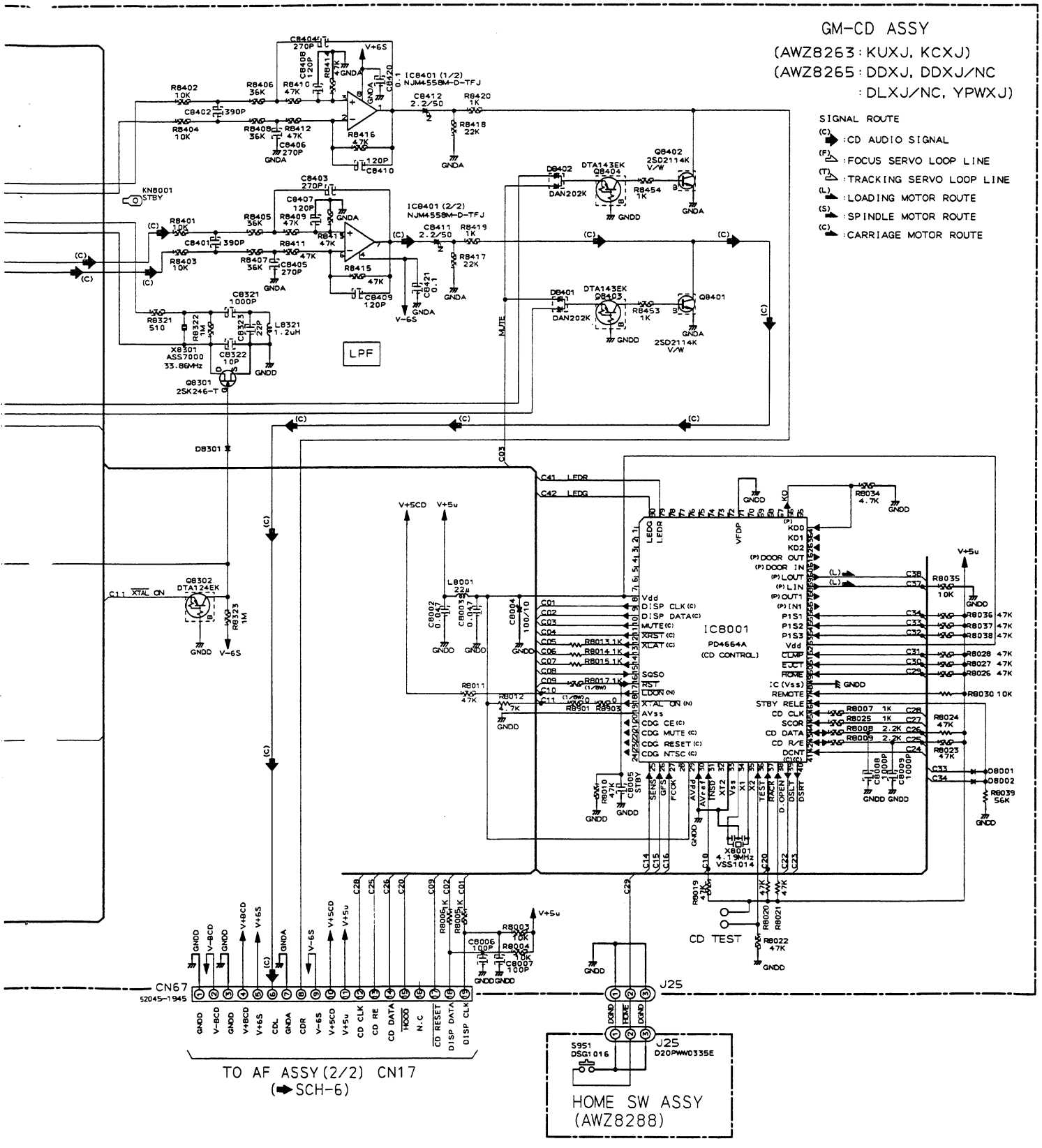


Note) If the parts are not identified.
the followings are used.

➡| 1SS254-T

SCH-4

SCH-4

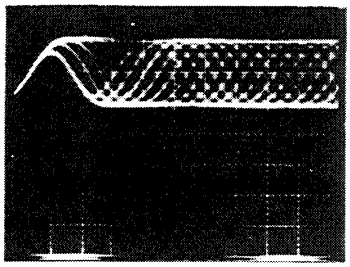

GM-CD ASSY
(AWZ8263 : KUXJ, KCXJ)
(AWZ8265 : DDXJ, DDXJ/NC
: DLXJ/NC, YPWXJ)
SIGNAL ROUTE
(C) :CD AUDIO SIGNAL
(F) :FOCUS SERVO LOOP LINE
(T) :TRACKING SERVO LOOP LINE
(L) :LOADING MOTOR ROUTE
(S) :SPINDLE MOTOR ROUTE
(C) :CARRIAGE MOTOR ROUTE
IC8001
PD4664A
(CD CONTROL)
LPF
CD TEST
CN67
52045-1945
TO AF ASSY(2/2) CN17
(➡SCH-6)
J25
D20PWW0335E
S951
DSG1016
HOME SW ASSY
(AWZ8288)

Waveforms

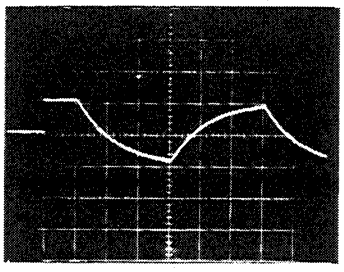
Note: The encircled numbers denote measuring point in the schematic disgram.

*2 FOCUS–IN: Press the key without loading a disc.

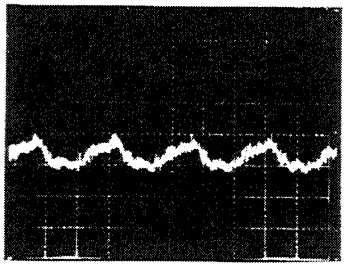
(2) TP(CN8201)-Pin1: PLAY MODE (RF)
500mV/div 500nsec/div



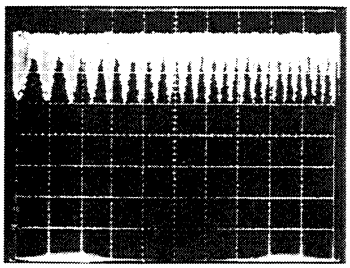
(5) IC8202-Pin3: FOCUS-IN (*2) MODE (FODR)
1V/div 200msec/div



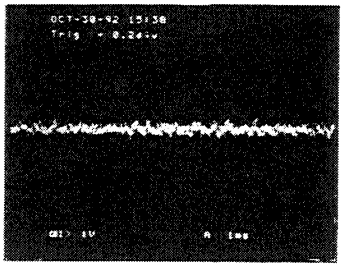
(7) IC8201-Pin3: PLAY MODE (SPDR)
1V/div 50msec/div



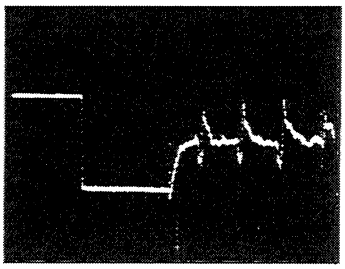
(2) TP(CN8201)-Pin1: TRACK SEARCH MODE (RF)
500mV/div 200μsec/div



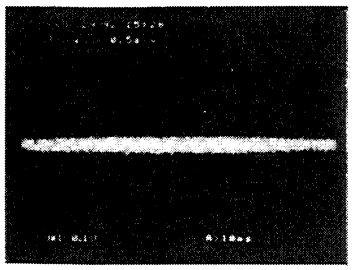
(5) IC8202-Pin3: PLAY MODE (FODR)
1V/div 1msec/div



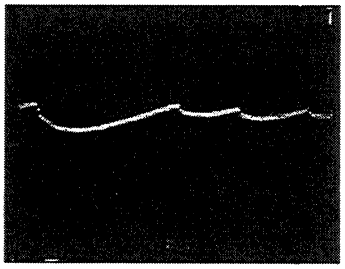
(7) IC8201-Pin3: TRACK SEARCH MODE (SPDR)
2V/div 50msec/div



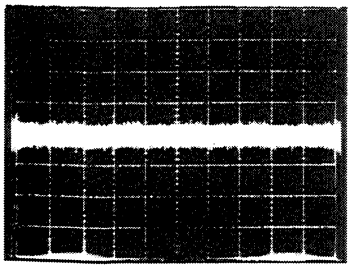
(3) TP(CN8201)-Pin6: PLAY MODE (FOER)
100mV/div 10msec/div



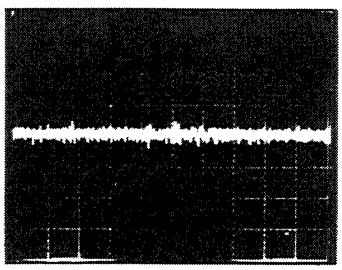
(8) IC8202-Pin9: PLAY MODE (CADR)
0.2V/div 2sec/div



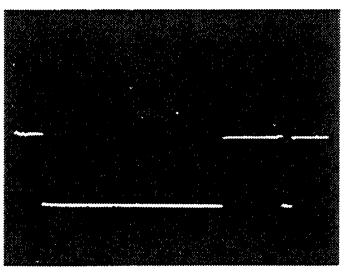
(4) TP(CN8201)-Pin2: PLAY MODE (TRER)
1V/div 1msec/div



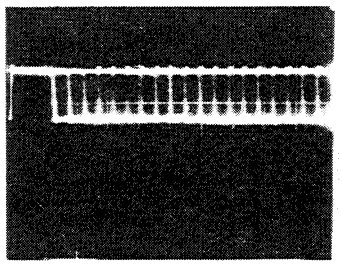
(6) IC8202-Pin4: PLAY MODE (TRDR)
500mV/div 1msec/div



(8) IC8202-Pin9: TRACK SEARCH MODE (CADR)
2V/div 200msec/div

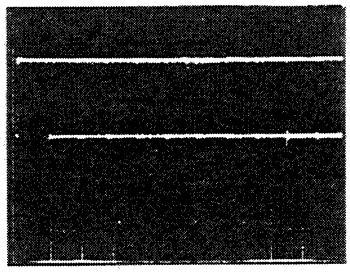


⑨ IC8151-Pin32: PLAY MODE (EFM)
2V/div 500nsec/div



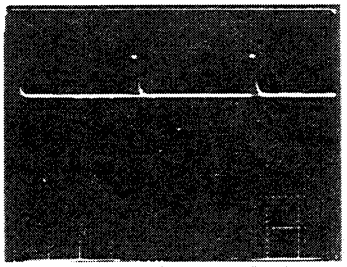
– GND

⑲ IC8301-Pin44: PLAY MODE (1kHz) (PCMD)
2V/div 500nsec/div



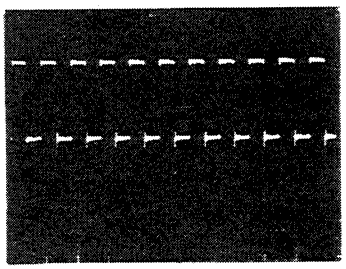
– GND

㉝ IC8301-Pin25: PLAY MODE (MDP)
2V/div 2μsec/div



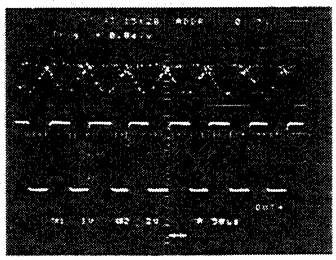
– GND

⑯ IC8301-Pin46: PLAY MODE (1kHz) (BCK)
2V/div 500nsec/div



– GND

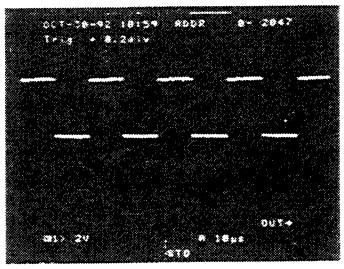
㉓ : TRACK SEARCH MODE
Upper: TP(CN8201)-Pin1 (RF) 1V/div
Lower: IC8151-Pin26 (C. OUT)
2V/div 50μsec/div



– GND

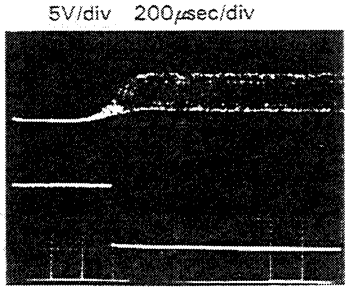
– GND

⑱ IC8301-Pin42: PLAY MODE (1kHz) (LRCK)
2V/div 10μsec/div



– GND

㉔ : PLAY MODE
Upper: TP(CN8201)-Pin1 (RF) 1V/div
Lower: IC8151-Pin30 (DFCT)
5V/div 200μsec/div



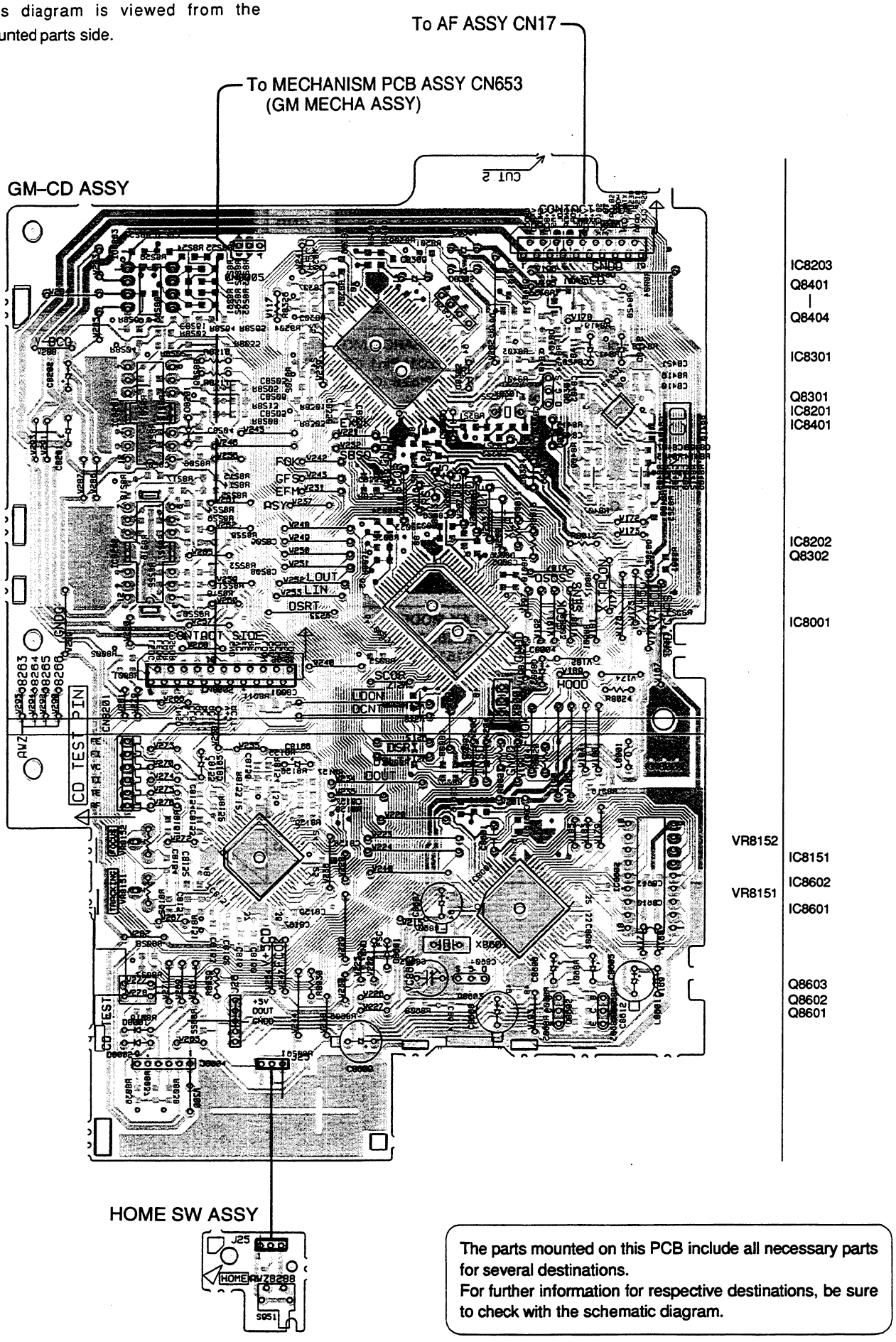
– GND

– GND

XR-P260F

PCB – 3

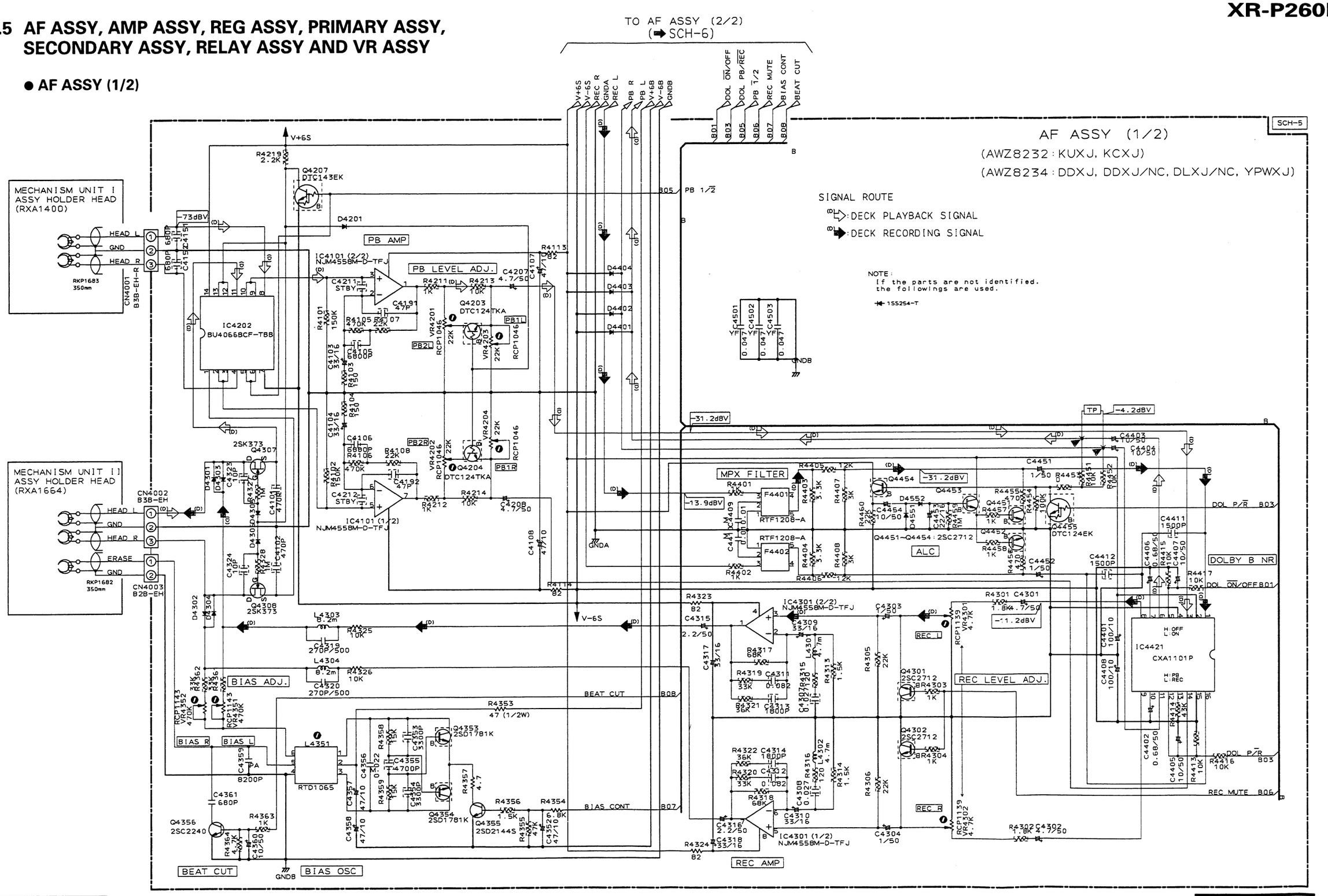
- This diagram is viewed from the mounted parts side.



The parts mounted on this PCB include all necessary parts for several destinations.
For further information for respective destinations, be sure to check with the schematic diagram.

4.5 AF ASSY, AMP ASSY, REG ASSY, PRIMARY ASSY, SECONDARY ASSY, RELAY ASSY AND VR ASSY

● **AF ASSY (1/2)**



XR-P260F

- This diagram is viewed from the mounted parts side.

PCB-4

RELAY ASSY

To FM/AM TUNER MODULE CN6201

To MECHANISM UNIT 2 HEAD

To DISPLAY ASSY CN73

Q2009 IC2001 IC2003 Q2006 Q2002 Q2005 Q2001 IC4421
Q2004 Q2003 IC2004 IC2002 Q1009 Q1010 Q4451 – Q4455
Q1007 Q1008 Q1011 Q1012 Q2201 – Q2206 Q2301 Q2302
Q1003 – Q1006

IC4301 Q4301 Q4302 Q4353 – Q4356
Q4203 Q4204 IC4101 Q4207 IC4102 Q4307 Q4308
Q1001 Q2303
Q1013

IC3001 Q3004 Q3101 Q3001 – Q3003

AF ASSY

VR4201 – VR4204 VR4301 VR4302 VR4351 VR4352 VR4901

AMP ASSY

IC301 IC302

To FAN MOTOR

To GM- CD ASSY CN67

IC1002 IC1005 IC1004 IC1001 IC1003

SECONDARY ASSY

17 16 15 14 13 12 11 10 9 8

To POWER TRANSFORMER

EXCEPT KUXJ, KCXJ TYPES

1 3 4 7

YPW TYPE ONLY

PRIMARY ASSY

To POWER TRANSFORMER Pin4 (KUXJ, KCXJ TYPES ONLY)

To S1 VOLTAGE SELECTOR Pin1 (DDXJ, DDXJ/NC, DLXJ/NC TYPES ONLY)

LIVE

NEUTRAL

To AC POWER CORD

To CONTROL ASSY CN70

To MECHANISM UNIT 1 HEAD

To CONTROL ASSY J72

REG ASSY

IC602 IC603 IC601

VR ASSY

VR701

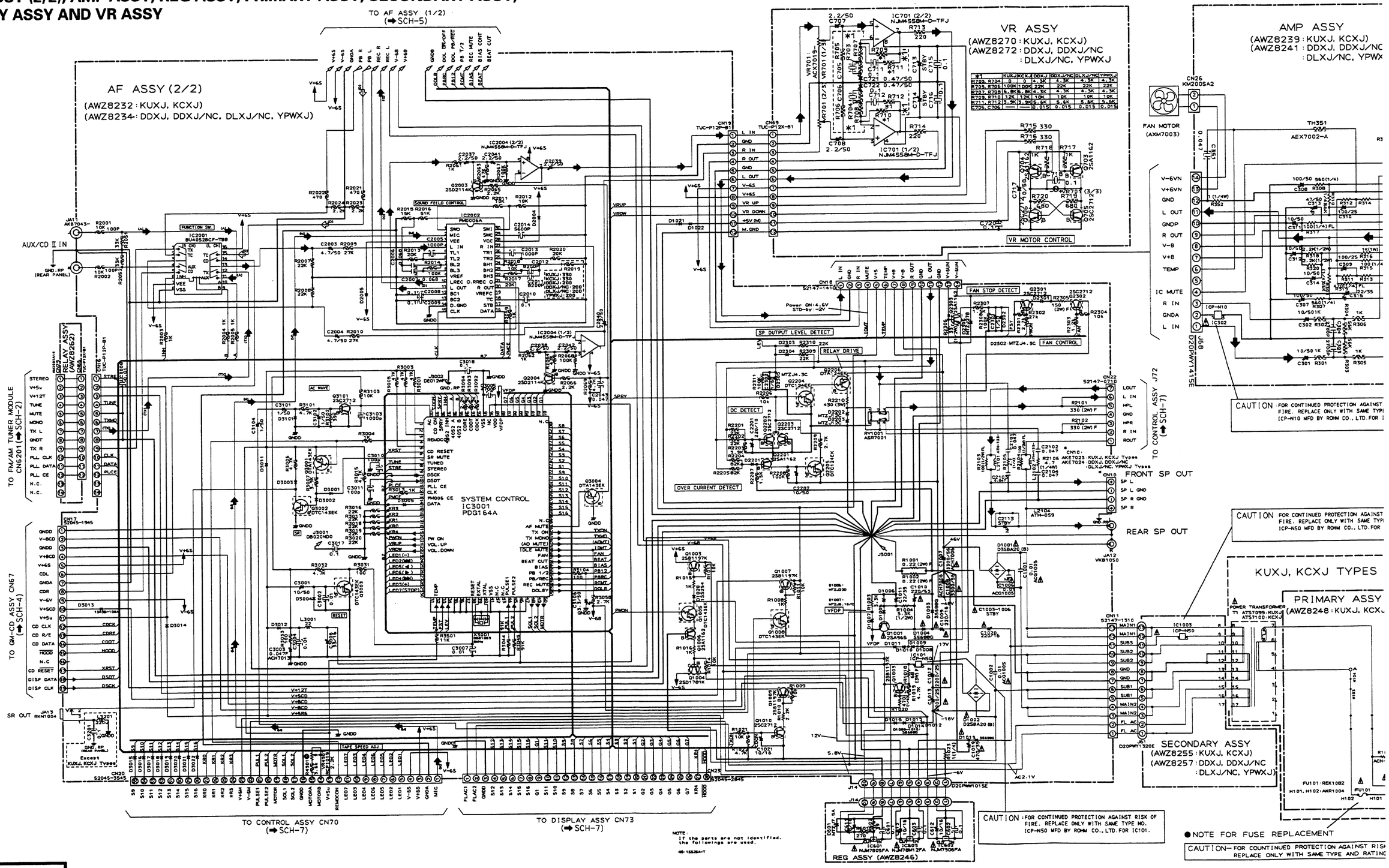
IC701

Q705 Q703

Q706 Q704

The parts mounted on this PCB include all necessary parts for several destinations.
For further information for respective destinations, be sure to check with the schematic diagram.

● AF ASSY (2/2), AMP ASSY, REG ASSY, PRIMARY ASSY, SECONDARY ASSY, RELAY ASSY AND VR ASSY



SCH–6 AF ASSY (2/2), AMP ASSY, REG ASSY, PRIMARY ASSY, SECONDARY ASSY, RELAY ASSY, VR ASSY

Y,

VR ASSY
(AWZ8270 : KUXJ, KCXJ)
(AWZ8272 : DDXJ, DDXJ/NC
: DLXJ/NC, YPWXJ

*1	KUXJ,KCXJ	DDXJ	DDXJ/NC	DLXJ/NC	YPWXJ
R704, R704	0	4.3K	4.3K	4.3K	4.3K
R705, R706	100K	22K	22K	22K	22K
R707, R708	6.8K	4.3K	4.3K	4.3K	4.3K
R709, R710	12K	10K	10K	10K	10K
R711, R712	13.3K	5.6K	5.6K	5.6K	5.6K
C705, C706	—	0.015	0.015	0.015	0.015

AMP ASSY
(AWZ8239 : KUXJ, KCXJ)
(AWZ8241 : DDXJ, DDXJ/NC
: DLXJ/NC, YPWXJ)

CAUTION FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE NO. ICP-N10 MFD BY ROHM CO., LTD. FOR IC302.

SIGNAL ROUTE
- AUDIO SIGNAL
- TUNER AUDIO SIGNAL
- AUX AUDIO SIGNAL
- DECK PLAYBACK SIGNAL
- DECK RECORDING SIGNAL
- MIC AUDIO SIGNAL

CAUTION FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE NO. ICP-N50 MFD BY ROHM CO., LTD. FOR IC1003.

KUXJ, KCXJ TYPES

SECONDARY ASSY
(AWZ8255 : KUXJ, KCXJ)
(AWZ8257 : DDXJ, DDXJ/NC
: DLXJ/NC, YPWXJ)

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE NO. ICP-N50 MFD BY ROHM CO., LTD. FOR IC101.

REG ASSY (AWZ8246)

● NOTE FOR FUSE REPLACEMENT

CAUTION— FOR COUNTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE AND RATINGS ONLY.

YPWXJ TYPE

PRIMARY ASSY
(AWZ8251 : YPWXJ)

DDXJ, DDXJ/NC, DLXJ/NC TYPES

PRIMARY ASSY
(AWZ8250 : DDXJ, DDXJ/NC)
(AWZ8346 : DLXJ/NC)

AF ASSY (2/2), AMP ASSY, REG ASSY,
PRIMARY ASSY, SECONDARY ASSY,
RELAY ASSY, VR ASSY

SCH-6

NOTE FOR SCHEMATIC DIAGRAMS (TYPE 1A)

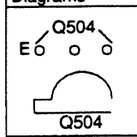
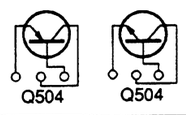
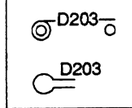
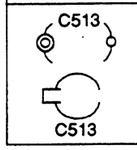
1. **When ordering service parts, be sure to refer to "PARTS LIST of EXPLODED VIEWS" or "PCB PARTS LIST".**
2. **Since these are basic circuits, some parts of them or the values of some components may be changed for improvement.**
3. **RESISTORS:**
   Unit: k:kΩ, M:MΩ, or Ω unless otherwise noted.
   Rated power: 1/4W, 1/6W, 1/8W, 1/10W unless otherwise noted.
   Tolerance: (F): ±1%, (G): ±2%, (K): ±10%, (M): ±20% or ±5% unless otherwise noted.
4. **CAPACITORS:**
   Unit: p:pF or μF unless otherwise noted.
   Ratings: capacitor (μF) / voltage (V) unless otherwise noted.
   Rated voltage: 50V except for electolytic capacitors.
5. **COILS:**
   Unit: m:mH or μH unless otherwise noted.
6. **VOLTAGE AND CURRENT:**
   ▭V : SIGNAL voltage at rated output.
   or ← V :
   DC voltage (V) at no input signal unless otherwise noted.
   Value in ( ) is DC voltage at rated power.
   ⇦ mA or ← mA :
   DC current at no input signal unless otherwise noted.
7. **OTHERS:**
   - ⊘ or ● : Adjusting point.
   - ◀ : Measurement point.
   - The ⚠ mark found on some components parts indicates the importance of the safety factor of the parts. Therefore, when replacing, be sure to use parts of identical designation.
8. **SCH-□ ON THE SCHEMATIC DIAGRAM:**
   - SCH-□ indicates the drawing number of the schematic diagram. (SCH stands for schematic diagram.)
9. **SWITCHES** (Underline indicates switch position):

CONTROL ASSY
S501: POWER STANDBY/ON
S502: DOLBY ON/OFF
S503: ◀◀ I◀◀ –
S504: BEST
S505: REC/STOP
S506: ASES/COPY
S507: FM/AM
S508: TAPE I /II
S509: STOP (■)
S510: START (►)
S511: ►► ►►I +
S513: KARAOKE
S514: AUX/CD II
S515: CD
S516: P. BASS (DEMO)
S517: TIMER
S518: FREQ/STATION
S519: MEMORY
S520: DISPLAY/CLOCK

DISPLAY ASSY
S401: DISC SELECT (+)
S402: DISC SELECT (–)

NOTE FOR PCB DIAGRAMS:

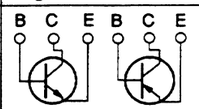
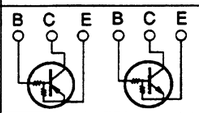
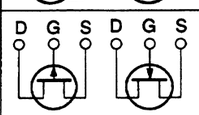
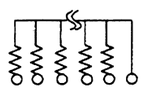
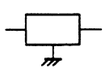
1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

Symbol in PCB Diagrams	Symbol in Schematic Diagrams	Part Name
		Transistor
		Diode
		Capacitor (Polarized)

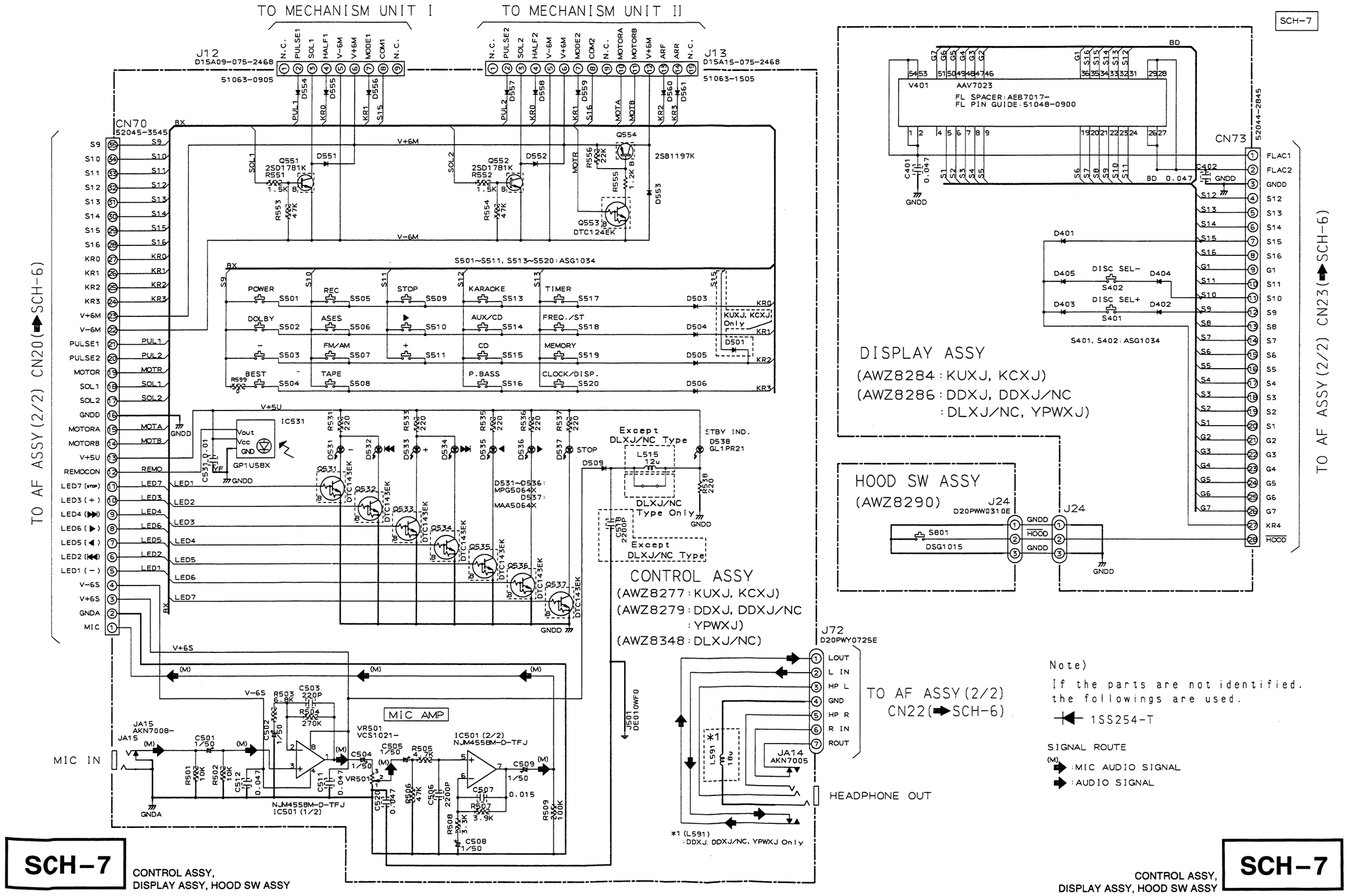
3. The transistor terminal marked with E or ⊏ shows the emitter.
4. The diode terminal marked with ◎ or ⊃ shows cathode side.
5. The capacitor terminal marked with ◎ or ⊏ shows negative terminal.

NOTE FOR PCB DIAGRAMS:

1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

Symbol in PCB Diagrams	Symbol in Schematic Diagrams	Part Name
		Transistor
		Transistor with resistor
		Field effect transistor
		Resistor array
		3- terminal regulator

4.6 CONTROL ASSY, DISPLAY ASSY AND HOOD SW ASSY



PCB – 5

HOOD SW ASSY

DISPLAY ASSY

To AF ASSY CN23

- This diagram is viewed from the mounted parts side.

The parts mounted on this PCB include all necessary parts for several destinations.
For further information for respective destinations, be sure to check with the schematic diagram.

CONTROL ASSY

To AF ASSY CN22

VR501
IC531 IC501
Q551
Q531 Q532
Q535
Q536
Q534 Q533
Q537 Q552 Q553

To MECHANISM UNIT 1

To AF ASSY CN20

To MECHANISM UNIT 2

5. PCB PARTS LIST

NOTES :

- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "●" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560Ω → 56 x 10¹ = 561 ..... RD1/4PU 5 6 1 J
47kΩ → 47 x 10³ = 473 ..... RD1/4PU 4 7 3 J
0.5Ω → 0R5 ..... RN2H 0 R 5 K
1Ω → 1R0 ..... RS1P 1 R 0 K

Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62kΩ → 562 x 10¹ = 5621 ..... RN1/4PC 5 6 2 1 F

■ LIST OF WHOLE PCB ASSEMBLIES

Mark	Symbol & Description	Part No.						Remarks
		KUXJ type	KCXJ type	DDXJ type	DDXJ/NC type	DLXJ/NC type	YPWXJ type	
	FM/AM TUNER MODULE	AXQ3112	AXQ3112	AXQ3112	AXQ3112	AXQ3112	AXQ3112	
NSP	MAIN ASSY	AWM7203	AWM7203	AWM7205	AWM7205	AWM7225	AWM7221	
	├ AF ASSY	AWZ8232	AWZ8232	AWZ8234	AWZ8234	AWZ8234	AWZ8234	
	├ AMP ASSY	AWZ8239	AWZ8239	AWZ8241	AWZ8241	AWZ8241	AWZ8241	*1
	├ REG ASSY	AWZ8246	AWZ8246	AWZ8246	AWZ8246	AWZ8246	AWZ8246	
NSP	├ PRIMARY ASSY	AWZ8248	AWZ8248	AWZ8250	AWZ8250	AWZ8346	AWZ8251	
NSP	├ SECONDARY ASSY	AWZ8255	AWZ8255	AWZ8257	AWZ8257	AWZ8257	AWZ8257	*2
NSP	└ RELAY ASSY	AWZ8262	AWZ8262	AWZ8262	AWZ8262	AWZ8262	AWZ8262	
NSP	COMP ASSY	AWM7210	AWM7210	AWM7212	AWM7212	AWM7222	AWM7212	
	├ GM–CD ASSY	AWZ8263	AWZ8263	AWZ8265	AWZ8265	AWZ8265	AWZ8265	*3
	├ VR ASSY	AWZ8270	AWZ8270	AWZ8272	AWZ8272	AWZ8272	AWZ8272	
	├ CONTROL ASSY	AWZ8277	AWZ8277	AWZ8279	AWZ8279	AWZ8348	AWZ8279	
	├ DISPLAY ASSY	AWZ8284	AWZ8284	AWZ8286	AWZ8286	AWZ8286	AWZ8286	*4
NSP	├ HOME SW ASSY	AWZ8288	AWZ8288	AWZ8288	AWZ8288	AWZ8288	AWZ8288	
NSP	└ HOOD SW ASSY	AWZ8290	AWZ8290	AWZ8290	AWZ8290	AWZ8290	AWZ8290	
NSP	GM MECHA ASSY	AXA7026	AXA7026	AXA7026	AXA7026	AXA7026	AXA7026	
NSP	├ LO MECHANISM BOARD ASSY	AWX7013	AWX7013	AWX7013	AWX7013	AWX7013	AWX7013	
NSP	├ MECHA PCB ASSY	AWZ7835	AWZ7835	AWZ7835	AWZ7835	AWZ7835	AWZ7835	
NSP	├ SENSOR PCB ASSY	AWZ7836	AWZ7836	AWZ7836	AWZ7836	AWZ7836	AWZ7836	
NSP	├ MOTOR PCB ASSY	AWZ7837	AWZ7837	AWZ7837	AWZ7837	AWZ7837	AWZ7837	
NSP	└ SW PCB ASSY	AWZ7838	AWZ7838	AWZ7838	AWZ7838	AWZ7838	AWZ7838	
NSP	└ SERVO MECHANISM ASSY GM	AXA7028	AXA7028	AXA7028	AXA7028	AXA7028	AXA7028	
NSP	└ MECHANISM BOARD ASSY	PWX1192	PWX1192	PWX1192	PWX1192	PWX1192	PWX1192	

*Note *1: Although AWZ8239 and AWZ8241 are different in part number, they have the same service parts.*
*Note *2: Although AWZ8255 and AWZ8257 are different in part number, they have the same service parts.*
*Note *3: Although AWZ8263 and AWZ8265 are different in part number, they have the same service parts.*
*Note *4: Although AWZ8284 and AWZ8286 are different in part number, they have the same service parts.*

■ CONTRAST OF PCB ASSEMBLIES

AF Assy

AWZ8232 and AWZ8234 have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ8232	AWZ8234	
	L3201	Not used	LAU221J	*
	C3201	Not used	CKSQYF104Z50	*
	R2019	RS/10S331J	RS1/10S201J	
	CN10	AKE7023	AKE7024	

*Note * : Refer to SCH–6.*

PRIMARY Assy

AWZ8248, AWZ8250, AWZ8346 and AWZ8251 and have the same construction except for the following :

Mark	Symbol & Description	Part No.				Remarks
		AWZ8248	AWZ8250	AWZ8346	AWZ8251	
	R101 (2.2MΩ, 1/2W)	ACN–208	Not used	Not used	Not used	

VR Assy

AWZ8270 and AWZ8272 have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ8270	AWZ8272	
	C705, C706	Not used	CKSQYB153K50	*
	R703, R704	RS1/10S000J	RS1/10S432J	
	R705, R706	RS1/10S104J	RS1/10S223J	
	R707, R708	RS1/10S682J	RS1/10S432J	
	R709, R710	RS1/10S123J	RS1/10S103J	
	R711, R712	RS1/10S392J	RS1/10S562J	

*Note * : Refer to SCH–6.*

CONTROL Assy

AWZ8277, AWZ8279 and AWZ8348 have the same construction except for the following:

Mark	Symbol & Description	Part No.			Remarks
		AWZ8277	AWZ8279	AWZ8348	
	D501	1SS254	Not used	Not used	
	L515	LAU120J	LAU120J	Not used	
	L591	Not used	LAU180J	Not used	*
	C518	CKSQYB222K50	CKSQYB222K50	Not used	

*Note * : Refer to SCH–6.*

■ PCB PARTS LIST

● Parts List for XR-P260F/KUXJ

Mark	No.	Description	Parts No.
FM/AM TUNER MODULE			
SEMICONDUCTORS			
	IC6201		LA1836M
	IC6202		LM7001J
	Q6102		2SC2223
	Q6203		2SC2235
	Q6202		2SC2712
	Q6103, Q6214		2SC2714
	Q6201		2SK208
	Q6104		2SK302
	Q6101		3SK194
	Q6204		XDA124EK
	Q6217		XDC124EK
	D6101, D6102		1T33
COILS AND FILTERS			
	L6104		ATC1003
	L6101		ATC1020
	L6102		ATC1021
	T6101		ATE-063
	L6207 (10.7MHz)		ATE1013
	F6203, F6204		ATF-119
	F6101		ATF-155
	F6202 (450kHz)		ATF1155
	L6103 (2.2μH)		ATH1043
	L6202, L6203, L6208		LCTA2R2J3225
CAPACITORS			
	C6202, C6234, C6236 (1μF/16V)		ACG1051
	C6107		CCSCH010C50
	C6229		CCSCH821J50
	C6110		CCSQCH020C50
	C6101		CCSQCH050C50
	C6108, C6203, C6268		CCSQCH101J50
	C6111, C6116, C6208, C6221, C6222		CCSQCH150J50
	C6115		CCSQCH330J50
	C6114		CCSQRH080D50
	C6113		CCSQRH180J50
	C6105		CCSQTH150J50
	C6261		CEAS010M50
	C6224, C6246, C6262		CEAS100M50
	C6227		CEAS101M10
	C6216, C6217		CEAS330M16
	C6231, C6233		CEAS3R3M50
	C6219		CEAS470M10
	C6243–C6245		CEAS470M16
	C6238		CEJA100M16
	C6249, C6250		CEJA4R7M35
	C6215		CFTXA103J50
	C6214		CFTXA224J50
	C6103, C6106, C6112, C6204		CKSQYB102K50
	C6102, C6109, C6117, C6210, C6264		CKSQYB103K50
	C6213		CKSQYB223K50
	C6230		CKSQYB333K50
	C6228, C6252		CKSQYB472K50
	C6209, C6237, C6265, C6267		CKSQYB473K50
	C6212, C6218		CKSQYF103Z50
	C6220, C6226, C6239, C6242, C6255		CKSQYF223Z50
	C6235		CKSQYF224Z25
	C6225, C6241, C6266		CKSQYF473Z50
	C6232		CKSYB333K50
	C6251		CKSYB472K50
	C6223		CKSYF103Z50
	C6263		CKSYF473Z50

Mark	No.	Description	Parts No.
RESISTORS			
	R6299, R6300		RD1/8PM102J
	R6113, R6116, R6118, R6268–R6271		RS1/8S000J
	R6275, R6276, R6278, R6283, R6284		RS1/8S000J
	R6290, R6293, R6294, R6297		RS1/8S000J
	R6243, R6244		RS1/8S101J
	R6211		RS1/8S103J
	R6237		RS1/8S182J
	R6209		RS1/8S221J
	R6239		RS1/8S332J
	R6101		RS1/8S470J
	VR6201 (10kΩ)		ACP1056
	VR6202		VRTB6VS223
	Other Resistors		RS1/10S□□□J
OTHERS			
	BN6201	TERMINAL 4-P	AKA1016
	X6203	CRYSTAL RESONATOR	ASS1042
	X6201	CRYSTAL RESONATOR	ASS1066
	X6202	CERAMIC RESONATOR	ATF1027
		AM RF TUNING BLOCK	AXX1025
	CN6201	14P SOCKET	KP200IA14L
AF ASSY			
SEMICONDUCTORS			
	IC2001		BU4052BCF
	IC4202		BU4066BCF
	IC4421		CXA1101P
⚠	IC101		ICP-N50
	IC2004, IC4101, IC4301		NJM4558M-D
	IC3001		PDG164A
	IC2002		PM0006A
	Q1006, Q2201, Q2303		2SA1162
⚠	Q1001		2SA965
	Q1003, Q1007, Q1009, Q1013		2SB1197K
	Q4356		2SC2240
	Q1010, Q2202, Q2203, Q2301, Q2302		2SC2712
	Q3101, Q4301, Q4302, Q4451–Q4454		2SC2712
	Q1004, Q4353, Q4354		2SD1781K
	Q2003, Q2004		2SD2114K
	Q4355		2SD2144S
	Q4307, Q4308		2SK373
	Q2206		DTA124EK
	Q3001, Q3004		DTA143EK
	Q2204, Q2205, Q4455		DTC124EK
	Q4203, Q4204		DTC124TKA
	Q1005, Q1008, Q3002, Q3003, Q4207		DTC143EK
	D3013		1SR35-100A
	D1005, D1020–D1022, D2004, D2005		1SS254
	D2201, D2301, D2303, D2304		1SS254
	D3001–D3005, D3011, D3012		1SS254
	D3014–D3022, D3101, D4201		1SS254
	D4301–D4306, D4401–D4404		1SS254
	D4551, D4552		1SS254
⚠	D1002		D2SBA20 (B)
⚠	D1001		D3SBA20 (B)
	D2202, D2203		MTZJ12C
	D1006		MTZJ22D
	D2306		MTZJ27B
	D2302, D2305		MTZJ4.3C

XR-P260F

Mark	No.	Description	Parts No.
	D1007		MTZJ5.1B
⚠	D1003, D1004		S5688G
	D1008–D1015		S5688G
⚠	D1019		S5688G
	COILS AND FILTERS		
	L2101, L2102 (1μH)		ATH-133
	L3001		LAU220J
	L4301, L4302		LTA472J
	L4303, L4304		LTA822J
	L4351 (4.05μH)		RTD1065
	F4401, F4402		RTF1208
	SWITCHES AND RELAYS		
	RY1001		ASR7001
	CAPACITORS		
⚠	C1001, C1002 (0.01μF/150V)		ACG1005
	C1006 (0.01μF/150V)		ACG1005
⚠	C1007, C1008 (3300μF/56V)		ACH7006
	C3003		ACH7013
	C4319, C4320		CCCSL271K500
	C4323, C4324		CCSQCH100D50
	C3010, C3011		CCSQCH101J50
	C4101, C4102		CCSQCH471J50
	C4151, C4152		CCSQCH681J50
	C4191, C4192		CCSQSL470J50
	C3016		CEANP3R3M50
	C2301, C2302, C3101, C3102		CEAS010M50
	C4303, C4304, C4451, C4452		CEAS010M50
	C1021		CEAS100M16
	C2202, C3001, C4360, C4403–C4405		CEAS100M50
	C4407, C4454		CEAS100M50
	C4401, C4408		CEAS101M10
	C4453		CEAS220M16
	C1011		CEAS220M35
	C2201		CEAS221M10
⚠	C1009, C1020		CEAS221M16
⚠	C1010		CEAS221M63
⚠	C1012, C1013		CEAS222M25
	C2037–C2042, C4315, C4316		CEAS2R2M50
	C3006, C4103, C4104, C4309, C4310		CEAS330M16
	C4317, C4318		CEAS330M16
	C4107, C4108, C4352, C4357, C4358		CEAS470M10
⚠	C1019		CEAS471M35
	C2003, C2004, C4207, C4208		CEAS4R7M50
	C4301, C4302		CEAS4R7M50
	C4402, C4406		CEASR68M50
	C4361		CKCYB681K500
	C2101–C2104, C4501–C4503		CKCYF473Z50
	C2005, C2013, C3103		CKSQYB102K50
	C4411, C4412		CKSQYB152K50
	C4313, C4314		CKSQYB182K50
	C4307, C4308		CKSQYB273K50
	C4353, C4354		CKSQYB332K50
	C3005, C4355		CKSQYB472K50
	C2043		CKSQYB473K50
	C2014		CKSQYB562K50
	C4105, C4106		CKSQYB682K50
	C2011, C2012		CKSQYB822K50
	C4311, C4312		CKSQYB823K25
	C3002, C3004, C3007, C3008		CKSQYF103Z50

Mark	No.	Description	Parts No.
	C2008–C2010, C3017, C3018		CKSQYF104Z50
	C4409, C4410		CQMA103J50
	C4356		CQMA223J50
	C2006, C2007		CQMA683J50
	C4359		CQPA822J100
	RESISTORS		
	R2306		RD1/2PM330J
	R1004		RD1/2PM332J
	R4353		RD1/2PM470J
	R2103, R2104		RD1/2PMFL101J
	R2105, R2106		RD1/4PM4R7J
	R1023		RD1/4PMF010J
	R1008, R1015, R1016		RD1/6PM102J
	R4325, R4326		RD1/6PM103J
	R1010		RD1/6PM222J
	R1003		RD1/6PM332J
	R1020		RD1/6PM471J
	R4357		RD1/6PM4R7J
	R4354		RD1/6PM682J
	R4113, R4114, R4323, R4324		RD1/6PM820J
	R2305		RS2LMF151J
	R2101, R2102		RS2LMF331J
	R1001, R1002		RS2LMFR22J
	R2210		RS3LMF431J
	R1018		RS3LMF680J
	VR4901 (2.2kΩ)		RCP1019
	VR4201–VR4204 (22kΩ)		RCP1046
	VR4301, VR4302 (4.7kΩ)		RCP1139
	VR4351, VR4352 (470kΩ)		RCP1143
	Other Resistors		RS1/10S□□□J
	OTHERS		
	CN17	19P FFC CONNECTOR	52045-1945
	CN23	28P FFC CONNECTOR	52045-2845
	CN20	35P FFC CONNECTOR	52045-3545
	CN22	7P JUMPER CONNECTOR	52147-0710
	CN11	13P JUMPER CONNECTOR	52147-1310
	JA11	AUDIO 2P PIN JACK	AKB7043
	CN10	SPEAKER TERMINAL 4-P	AKE7023
	CN4003	2P TOP POST	B2B-EH
	CN4002	3P TOP POST	B3B-EH
	CN4001	3P TOP POST(RED)	B3B-EH-R
	J3001	BOARD-IN WIRE	DB020ND0
	X3001 (8.00MHz)		DSS1053
	JA13	REMOTE CONTROL JACK	RKN1004
	CN16, CN19	CONNECTOR (12P)	TUC-P12P-B1
		PCB BINDER	VEF1008
	JA12	2P PIN JACK	VKB1050

AMP ASSY

	SEMICONDUCTORS		
⚠	IC302		ICP-N10
⚠	IC301		STK4192-2GP
	CAPACITORS		
	C315		CEANP220M50
	C313		CEANP470M50
	C301, C302, C311, C312, C314		CEAS100M50
	C309, C310		CEAS101M25
	C307, C308		CEAS101M50
	C303, C304		CKSQYB272K50
	C351		CKSQYB473K50

Mark	No.	Description	Parts No.
	RESISTORS		
	R311–R314		RD1/2PM332J
	R307, R308		RD1/4PM561J
	R309, R310		RD1/4PM563J
	R352		RD1/4PMF010J
	R315, R317		RD1/4PMFL101J
	R318, R320		RD1/4PMFL222J
	R319		RD1/4PMFL471J
	R316		RS1LMF102J
	Other Resistors		RS1/10S□□□J
	OTHERS		
	TH351	THERMISTOR	AEX7002
	REG ASSY		
	SEMICONDUCTORS		
⚠	IC601		NJM7805FA
⚠	IC603		NJM78M12FA
⚠	IC602		NJM7906FA
	D601		MTZJ7.5A
	CAPACITORS		
	C611–C613		CEAS100M16
	C601–C603		CKSQYF104Z50
	RESISTORS		
	All Resistors		RS1/10S□□□J
	PRIMARY ASSY		
	RESISTORS		
⚠	R101 (2.2MΩ, 1/2W)		ACN–208
	SECONDARY ASSY		
	SEMICONDUCTORS		
⚠	IC1003		ICP–N50
	RELAY ASSY		
	OTHERS		
	CN29	14P PLUG	KM200IA14
	CN66	12P CONNECTOR	TUC–P12X–B1
	GM–CD ASSY		
	SEMICONDUCTORS		
	IC8151		CXA1372Q
	IC8301		CXD2508AQ
⚠	IC8201, IC8202		LA6520
	IC8401		NJM4558M–D
	IC8001		PD4664A
	Q8401, Q8402		2SD2114K
	Q8301		2SK246
	Q8302		DTA124EK
	Q8403, Q8404		DTA143EK
	D8001, D8002, D8301, D8302		1SS254
	D8401, D8402		DAN202K
	COILS AND FILTERS		
	L8321		LAU1R2J
	L8001		LAU220J

Mark	No.	Description	Parts No.
	CAPACITORS		
	C8322		CCSQCH100D50
	C8006, C8007, C8350, C8351		CCSQCH101J50
	C8407–C8410		CCSQCH121J50
	C8323		CCSQCH220J50
	C8403–C8406		CCSQCH271J50
	C8401, C8402		CCSQCH391J50
	C8411, C8412		CEANP2R2M50
	C8004		CEAS101M10
	C8301		CEAS330M16
	C8165, C8166		CEAS4R7M50
	C8309		CEASR47M50
	C8302, C8303		CGCYX104M16
	C8008, C8009, C8162, C8321		CKSQYB102K50
	C8152, C8157, C8160		CKSQYB103K50
	C8306		CKSQYB152K50
	C8352		CKSQYB223K50
	C8161		CKSQYB332K50
	C8151, C8159		CKSQYB333K50
	C8163		CKSQYB472K50
	C8002, C8003, C8307		CKSQYB473K50
	C8164		CKSQYB561K50
	C8158, C8203–C8209, C8308		CKSQYF103Z50
	C8153–C8156, C8167, C8420, C8421		CKSQYF104Z50
	RESISTORS		
	R8013–R8015		RD1/6PM102J
	R8030		RD1/6PM103J
	R8210, R8211		RD1/6PM104J
	R8012		RD1/6PM472J
	R8020, R8021, R8024		RD1/6PM473J
	R8039		RD1/6PM563J
	R8901		RS1/8S000J
	R8017		RS1/8S102J
	VR8151, VR8152 (22kΩ)		RCP1103
	Other Resistors		RS1/10S□□□J
	OTHERS		
	CN67	19P FFC CONNECTOR	52045–1945
	CN8002	22P FFC CONNECTOR	52045–2245
	CN8201	6P SIDE POST	VKN–004
	X8301 (33.8688MHz±700ppm)		ASS7000
	X8001 (4.19MHz)		VSS1014
	VR ASSY		
	SEMICONDUCTORS		
	IC701		NJM4558M–D
	Q703, Q704		2SA1162
	Q705, Q706		2SC2712
	CAPACITORS		
	C717		CEAS100M50
	C707, C708		CEAS2R2M50
	C721, C722		CEASR47M50
	C711, C712, C715, C716, C718		CKSQYF104Z50
	C720		CKSQYF104Z50
	RESISTORS		
	VR701 (50K–B × 2)		ACX7019
	Other Resistors		RS1/10S□□□J
	OTHERS		
	CN69	12P CONNECTOR	TUC–P12X–B1

XR-P260F

Mark	No.	Description	Parts No.
CONTROL ASSY			
SEMICONDUCTORS			
	IC501		NJM4558M-D
	Q554		2SB1197K
	Q551, Q552		2SD1781K
	Q553		DTC124EK
	Q531-Q537		DTC143EK
	D501, D503-D506, D509		1SS254
	D551-D561		1SS254
	D538		GL1PR21
	D537		MAA5064X
	D531-D536		MPG5064X
COILS AND FILTERS			
	L515		LAU120J
SWITCHES AND RELAYS			
	S501-S511, S513-S520		ASG1034
CAPACITORS			
	C503		CCSQCH221J50
	C501, C502, C504, C505		CEJA010M50
	C508, C509		CEJA010M50
	C507		CKSQYB153K50
	C506, C518		CKSQYB222K50
	C531		CKSQYF103Z50
	C511, C512, C520		CKSQYF473Z50
RESISTORS			
	R555		RD1/6PM122J
	R538		RD1/6PM221J
	VR501(10kΩ)		VCS1021
	Other Resistors		RS1/10S□□□J
OTHERS			
		9P CABLE HOLDER	51048-0905
		15P CABLE HOLDER	51063-1505
	CN70	35P FFC CONNECTOR	52045-3545
	JA14	MINITURE JACK	AKN7005
	JA15	MINI JACK	AKN7008
	J12	JUMPER WIRE	D15A09-075-2468
		REMOTE RECEIVER UNIT	GP1U58X
DISPLAY ASSY			
SEMICONDUCTORS			
	D401-D405		1SS254
SWITCHES AND RELAYS			
	S401, S402		ASG1034
CAPACITORS			
	C401, C402		CKSQYF473Z50
OTHERS			
		FL PIN GUIDE	51048-0900
	CN73	28P FFC CONNECTOR	52044-2845
	V401	FL TUBE	AAV7023
		FL SPACER	AEB7017
HOME SW ASSY			
SWITCHES AND RELAYS			
	S951		DSG1016

Mark	No.	Description	Parts No.
HOOD SW ASSY			
SWITCHES AND RELAYS			
	S801		DSG1015
OTHERS			
	J24	3P JUMPER WIRE	D20PWW0310E
MECHA PCB ASSY			
SEMICONDUCTORS			
	Q651		DTC124ES
	D651		VRPG5615S
RESISTORS			
	R652 (10kΩ)		ACN7011
	R651 (56kΩ)		ACN7012
	R653 (220Ω, 1/6W)		DCN1062
	R654 (0Ω)		DCN1065
OTHERS			
	CN652	12P FFC CONNECTOR	12FMZ-AST
	CN651	4P MT CONNECTOR	173979-4
	CN653	22P FFC CONNECTOR	SLEM22R-2
SENSOR PCB ASSY			
SEMICONDUCTORS			
	D652		GP1S24
OTHERS			
	J652	3P JUMPER WIRE	D20PWW0315E
MOTOR PCB ASSY			
OTHERS			
		LOADING MOTOR	VXM1034
SW PCB ASSY			
SWITCHES AND RELAYS			
	S651, S652		VSG1006
OTHERS			
	J656	3P JUMPER WIRE	D20PWW0315E
MECHANISM BOARD ASSY			
SWITCHES AND RELAYS			
	S610		DSG1016
OTHERS			
	CN610	4P MT CONNECTOR	173979-4

6. ADJUSTMENTS

6.1 TUNER SECTION

■ FM Tuner Section

- Set the mode selector to FM BAND.
- Connect the wiring as shown in Fig. 1–1.

Step No.	Adjustment Title	FM SG (1kHz, ±75kHz dev.)		Reception Frequency Display	Adjustment Location	Specifications
		Frequency (MHz)	Level (dBμV)			
1	Center Adjustment	98 Non modulation	80 or more	—	L6207	Adjust so that the DC voltage between IC6201-Pin 4 and Pin 28 (or ⊕ leads of C6224 and C6261) becomes 0V±50mV.
2	Front End Sensitivity	98	10-30	98MHz	L6102 T6101	Adjust so that the DC voltage between the IC6201-Pin 12 and GND (or ⊕ leads of C6238 and GND) becomes at maximum level.
3	Stereo Distortion	98	80	98MHz	T6101	Minimize the distortion with 1/8 rotation of the core.
4	TUNED IND. Lighting Level	98	15±2	98MHz	VR6201	Adjust so that the indicator of TUNED IND. starts to light up.

Notes:

- *Before adjusting, make sure there is no gap between L6101 and L6102. If there is a gap between them, bring them into contact with each other first, and then make adjustments.*
- *Make indicator adjustments in order of AM →FM.*

■ AM Tuner Section

- Set the mode selector to AM BAND.
- Connect the wiring as shown in Fig. 1–1.

Step No.	Adjustment Title	AM SG (400Hz, 30% Mod.)		Reception Frequency Display	Adjustment Location	Specifications
		Frequency (kHz)	Level (dBμV/m)			
1	TUNED IND. Lighting Level	999	47±2	999kHz*1	VR6202	Adjust so that the indicator of TUNED IND. starts to light up.

*1: For the area using 10kHz step, frequencies should be 1000 kHz

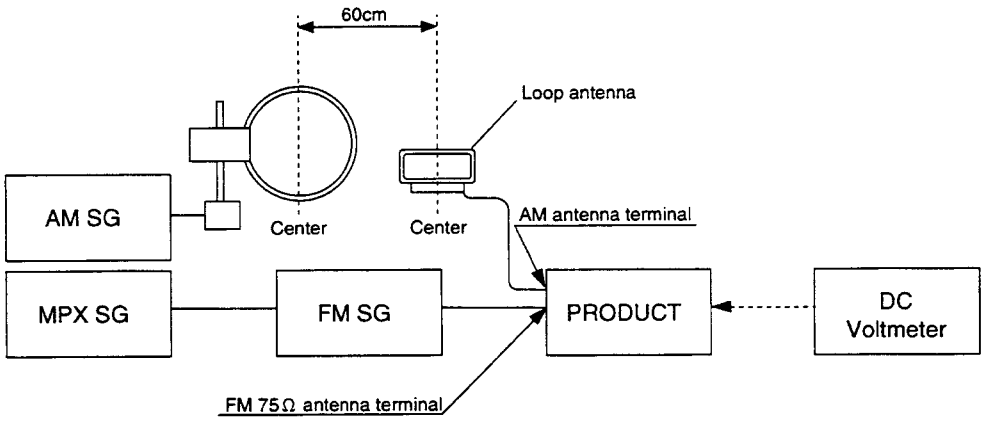


Fig. 1–1 AM and FM Adjustment Wiring Diagram

FM/AM TUNER MODULE (AXQ3112)

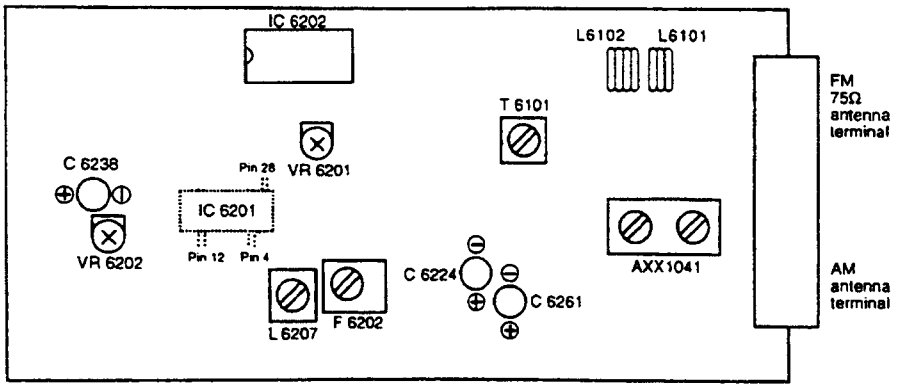


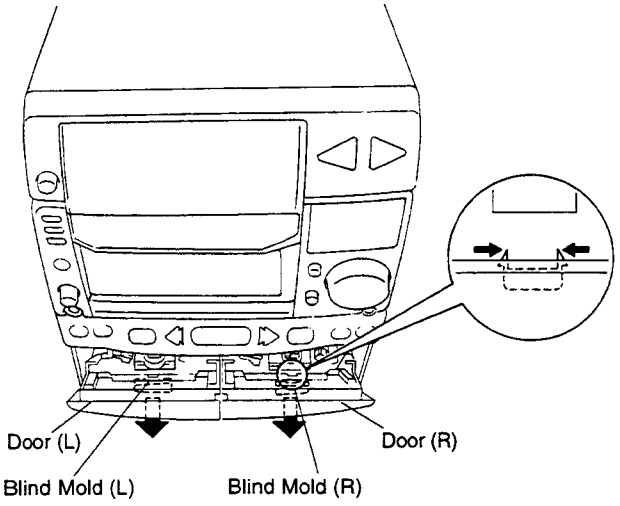
Fig. 1–2 Adjustment Points

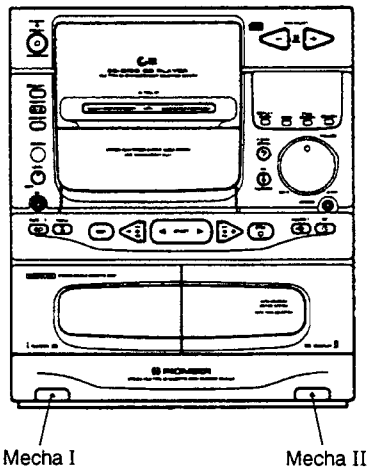
6.2 CASSETTE DECK SECTION

• Adjustment points and test points are shown in Fig. 2-3 and Fig. 2-4.

■ Before Adjustment

1. For execution of head angle adjustment, first remove the blind molds (L) and (R).
2. Open the cassette doors (L) and (R).
3. Insert your fingers into the cassette door, push down the two hooks at the upper side of the blind mold, and push them slightly out to the front. Excessive pushing at this time may make it impossible to close the cassette door.
4. Confirm that the blind molds (L) and (R) have been pushed out a little to the front, and then close the cassette doors (L) and (R) and remove the blind molds.





■ Mechanical Adjustment

• Test tape: STD-301 (3kHz, 30min).

1. Tape Speed Adjustment

No.	Mode	Test Tape	Adjusting Points	Measurement Points	Adjustment Procedure	Remarks
1	Deck I PLAY	STD-301 (Playback: 3kHz)	AF Assy VR4901	TAPE TEST POINT (Rch) (AF Assy)	Press the PLAY SW and adjust so that the reading becomes 3000Hz ±20Hz. Confirm that wow & flutter level is below 0.2% (in the reverse direction, confirm that the reading is within 3000Hz ±60Hz).	

■ Electrical Adjustment

Check the following before starting.

1. Confirm that the tape speed adjustment has been completed.
2. Clean the heads and demagnetize them using a head eraser.
3. Set the measurement level to 0 dBV = 1 Vrms.
4. Use the specified tape for adjustment. Use the labeled (A) side of the test tape.
   STD-331E: For playback adjustment
   STD-631or STD-632: Normal blank tape
5. Provide yourself with the following measuring devides:
   - AC millivoltmeter
   - Low-frequency oscillator
   - Attenuator
   - Oscilloscope
6. Adjust both right and left channels unless otherwise specified.
7. Turn the DOLBY NR switch off unless otherwize specified.
8. Warm up the unit for several minutes before adjustment. In particular, be sure to warm up the unit in the REC/PLAY mode for 3 to 5 minutes before starting recording/playback frequency characteristics adjustment.
9. Always follow the indicated adjustment order. Otherwise, a complete adjustment may not be achieved.

Playback Adjustment (Decks I and II)

1. Head Azimuth Adjustment
2. Playback Level Adjustment

Recording Adjustment (Deck II)

1. Bias Oscillation Frequency Adjustment
2. Recording Bias Adjustment
3. Recording Level Adjustment.
4. ALC Operation Check

* *As the reference recording level is 250nwb / m for STD-331E, the recording level will be higher by 4 dB for STD-331B (160nwb / m). When adjusting, pay carefull attention to the type of tape used.*

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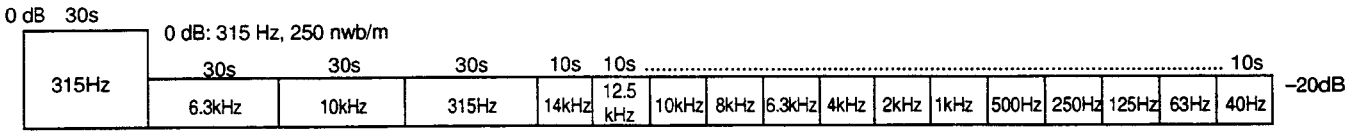


Fig. 2-1 STD-331E Test Tape

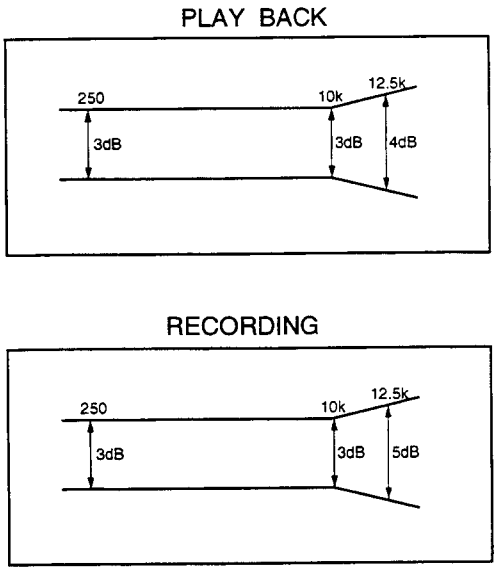


Fig. 2-2 Frequency Characteristics

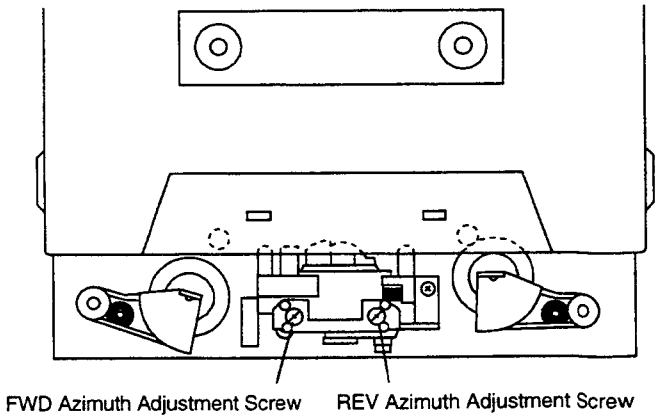


Fig. 2-3 Head Azimuth Adjustment

■ Playback Adjustment

- This unit is equipped with auto tape selector.
- Do not switch between forward and reverse operation with the screwdriver inserted.

1. Head Azimuth Adjustment

Step	Tape Selector (AUTO)	Mode	Input Signal/ Test Tape	Adjusting Points		Measurement Points	Adjustment Value	Remarks
1	NORMAL	PLAY	STD-331E test tape (Playback: 10kHz, –20dB)	Deck I	Head azimuth adjustment screw (Fig. 2-3)	TAPE TEST POINT (L, Rch) (AF Assy)	Max. playback signal level	After adjustment, apply silicon bond to the head azimuth adjustment screw.
				Deck II				

2. Playback Level Adjustment

- Since this adjustment determines playback Dolby NR level, perform it carefully.

Step	Tape Selector (AUTO)	Mode	Input Signal/ Test Tape	Adjusting Points		Measurement Points	Adjustment Value	Remarks
1	NORMAL	PLAY	STD-331E test tape (Playback: 315Hz, 0dB)	Deck I	VR4203 (Lch) VR4204 (Rch)	TAPE TEST POINT (L, Rch) (AF Assy)	– 4.2 dBV	
				Deck II	VR4201 (Lch) VR4202 (Rch)			

Note: Please execute playback level adjustment always in the order of deck I → deck II. When deck I has been adjusted, always adjust deck II also.

■ Recording Adjustment

1. Bias Oscillation Frequency Adjustment

Step	Tape Selector (AUTO)	Mode	Input Signal/ Test Tape	Adjusting Points		Measurement Points	Adjustment Value	Remarks
1	NORMAL	REC	Load the STD–631 or STD–632 test tape and set the recording mode.	Deck I	———	———	Oscillation frequency to be 105.0kHz ±2kHz.	When the power is turned ON while the MEMORY button is depressed, the frequency will decrease 2 – 3 kHz.
				Deck II	L4351	Between Ⓐ point in Fig. 2-4 and GND.		

2. Recording Bias Adjustment

- Since this adjustment affects recording bias, prevent distortion from increasing due to underbias.

Step	Tape Selector (AUTO)	Mode	Input Signal/Test Tape	Adjusting Points		Measurement Points	Adjustment Value	Remarks
1	NORMAL	REC	Input a 315Hz signal to the AUX/ CD II terminal and set the input selector to AUX/CD II.	Deck I	——	TAPE TEST POINT (L, Rch) (AF Assy)	– 24.2 dBV	
				Deck II	Input signal level			
2	NORMAL	REC→ PLAY	Load the STD-631 or STD-632 test tape and record/playback the 315Hz and 10kHz signals. (see the Note below)	Deck I	——	TAPE TEST POINT (L, Rch) (AF Assy)	Repeat adjustment until playback level of the 10kHz signal is within 0±0.5dB from that of the 315Hz signal.	
				Deck II	VR4351 (Lch) VR4352 (Rch)			

Note: Set the 10kHz input signal level to the same value as the 315Hz input signal level of step 1.

3. Recording Level Adjustment

Step	Tape Selector (AUTO)	Mode	Input Signal/Test Tape	Adjusting Points		Measurement Points	Adjustment Value	Remarks
1	NORMAL	REC	Input a 315Hz signal to the AUX/CD II terminal and set the input selector to AUX/CD II.	Deck I Deck II	Input signal level	TAPE TEST POINT (L, Rch) (AF Assy)	– 8.2 dBV	
2	NORMAL	REC → PLAY	STD-631 or STD-632 test tape and record/playback the 315Hz signal.	Deck I Deck II	—— VR4301 (Lch) VR4302 (Rch)	TAPE TEST POINT (L, Rch) (AF Assy)	Repeat recording, playback and adjustment until playback level of the 315Hz signal becomes -8.2dBV.	

4. ALC Operation Check

Step	Tape Selector (AUTO)	Mode	Input Signal/Test Tape	Adjusting Points	Measurement Points	Adjustment Value	Remarks
1	NORMAL	REC	Input a 315Hz signal to the AUX/CD II terminal and set the input selector to AUX/CD II.	Input signal level	TAPE TEST POINT (L, Rch) (AF Assy)	– 8.2 dBV	
2				Set to a level +10 dB above the input level at step 1.		Confirm that the reading is –3.2±2.5dBV.	

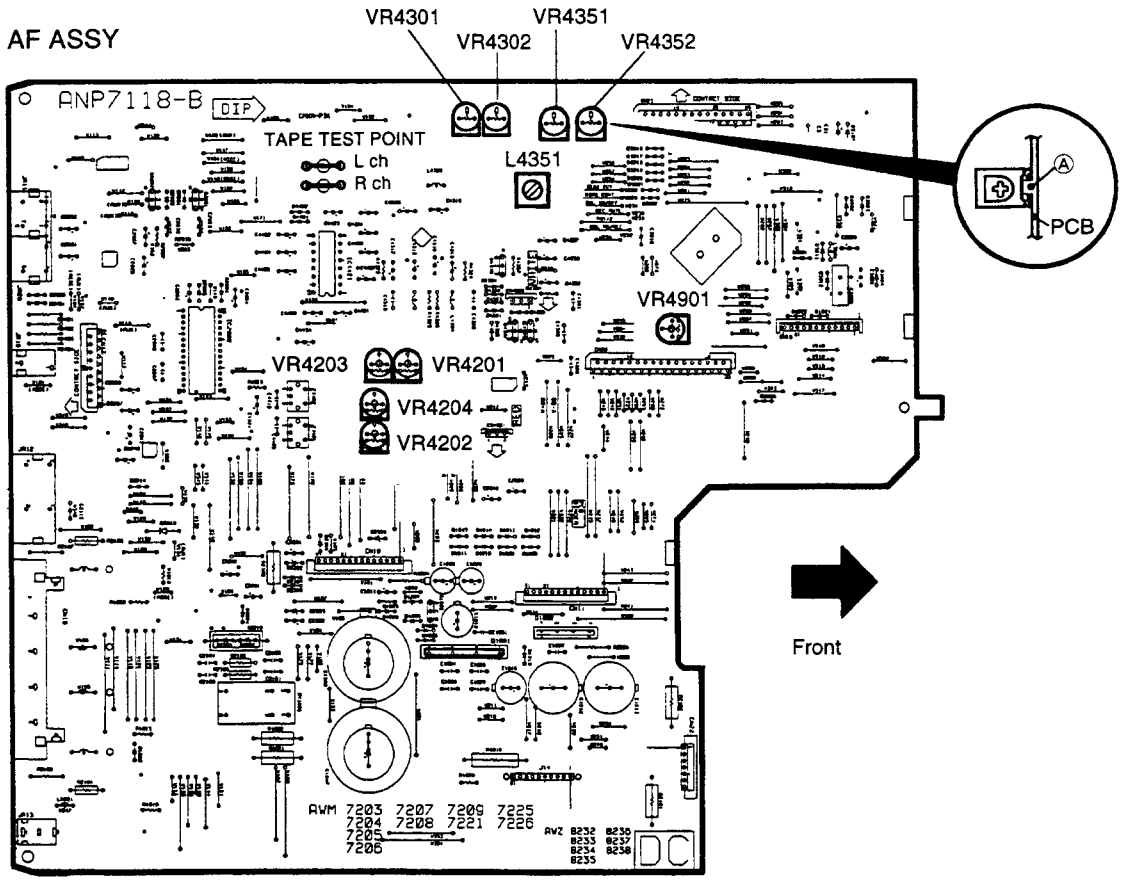
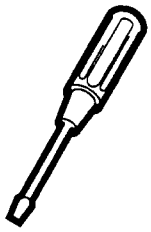
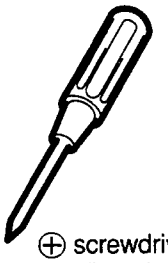
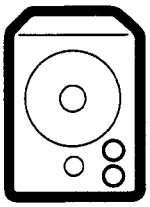
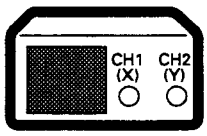
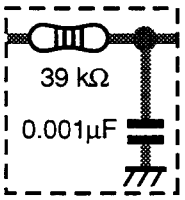


Fig. 2–4 Adjustment and Measurement points

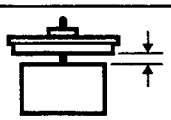
6.3 CD SECTION (CD部の調整)

1. PREPARATIONS (準備)

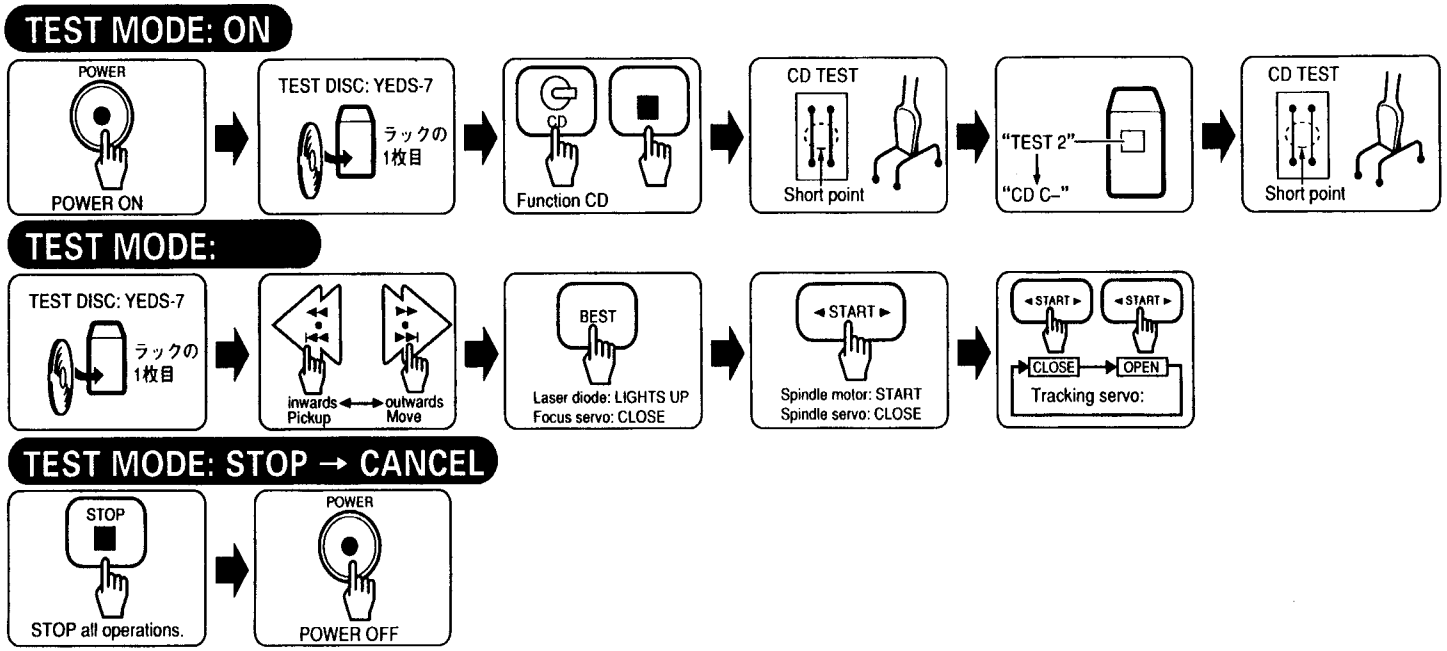
1.1 Jigs and Measuring Instruments (使用測定器/治工具類)

CD TEST DISC (YEDS-7)	⊖ Precise screwdriver	 ⊖ screwdriver (small)	⊕ screwdriver (medium)
 ⊕ screwdriver (large)	 Low-frequency oscillator	 Dual-trace oscilloscope (10 : 1 probe)	 Low pass filter (39 kΩ + 0.001μF)

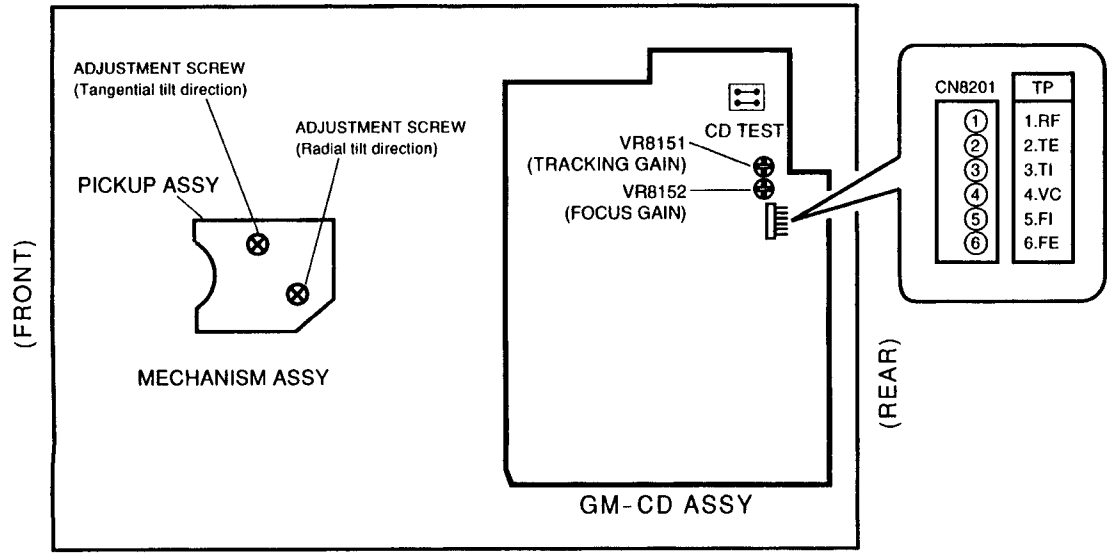
1.2 Necessary Adjustment Points (調整に必要な項目)

When (このような時)	Adjustment points
Exchange PICKUP (ピックアップを交換した時)	1.2.3.4.5.6. → Page 56~58
Exchange CD ASSY (CD ASSYを交換した時)	1.2.3.4.5.6. → Page 56~58
Exchange SERVO MECH ASSY (サーボメカ ASSYを交換した時)	1.2.3.4.5.6. → Page 56~58
Exchange SPINDLE MOTOR (スピンドルモーターを交換した時)	 ADJ → Page 12

2.1 How to Start/Cancel Test Mode （テストモ-ドの設定/解除）

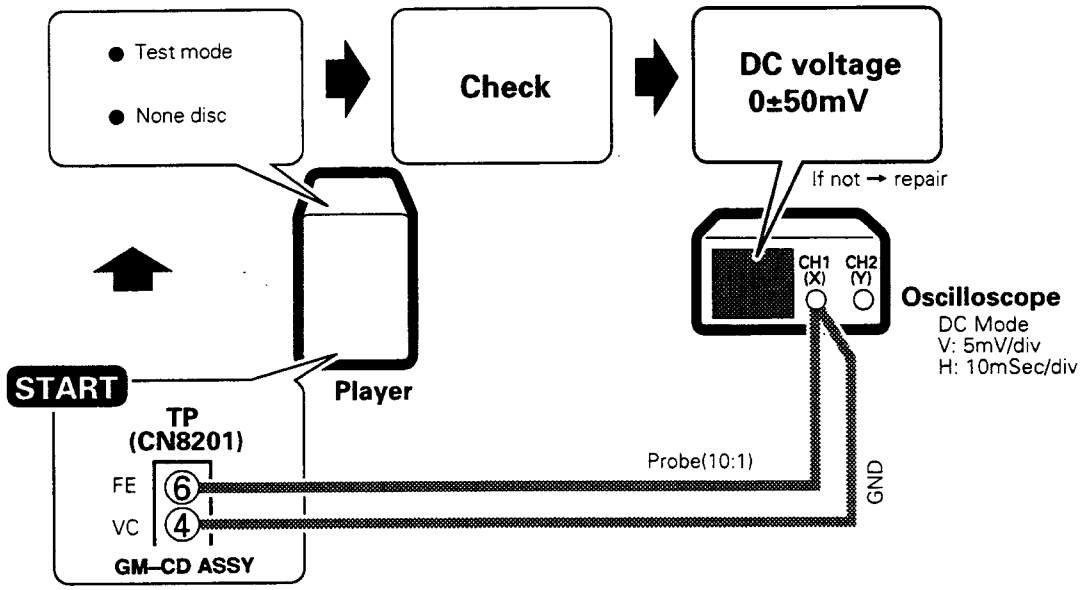


2.2Adjustment Locations（テストポイントと調整用VRの位置）

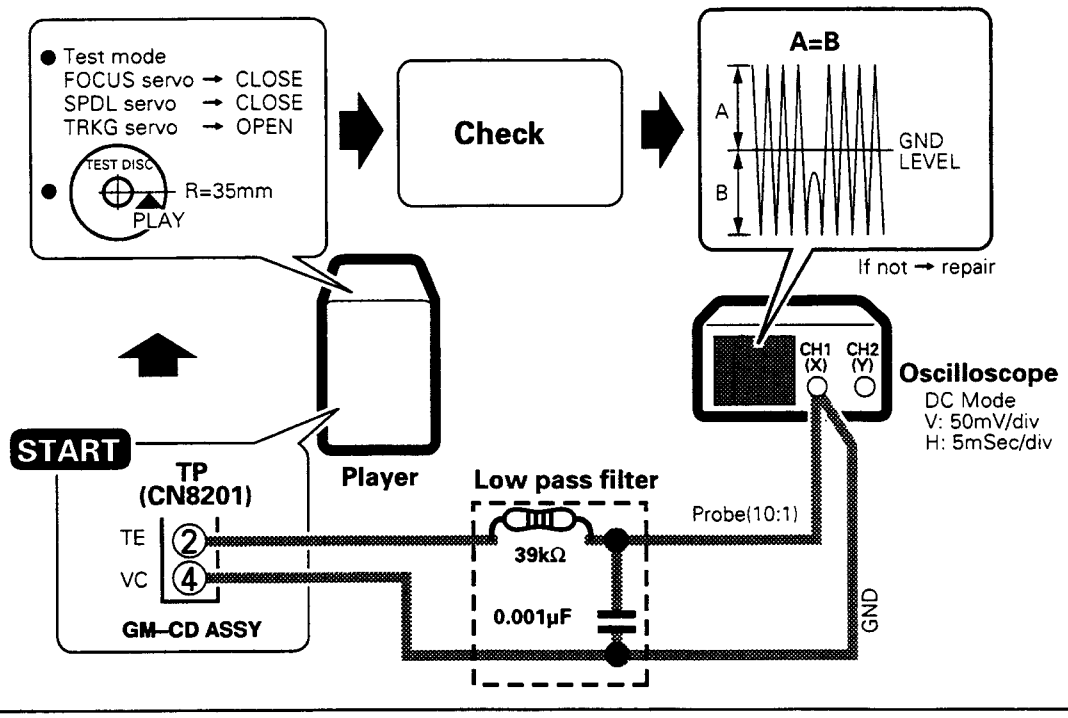


2.3 Check and Adjustment (確認、調整)

1. Focus Offset Check
(フォーカスオフセット確認)

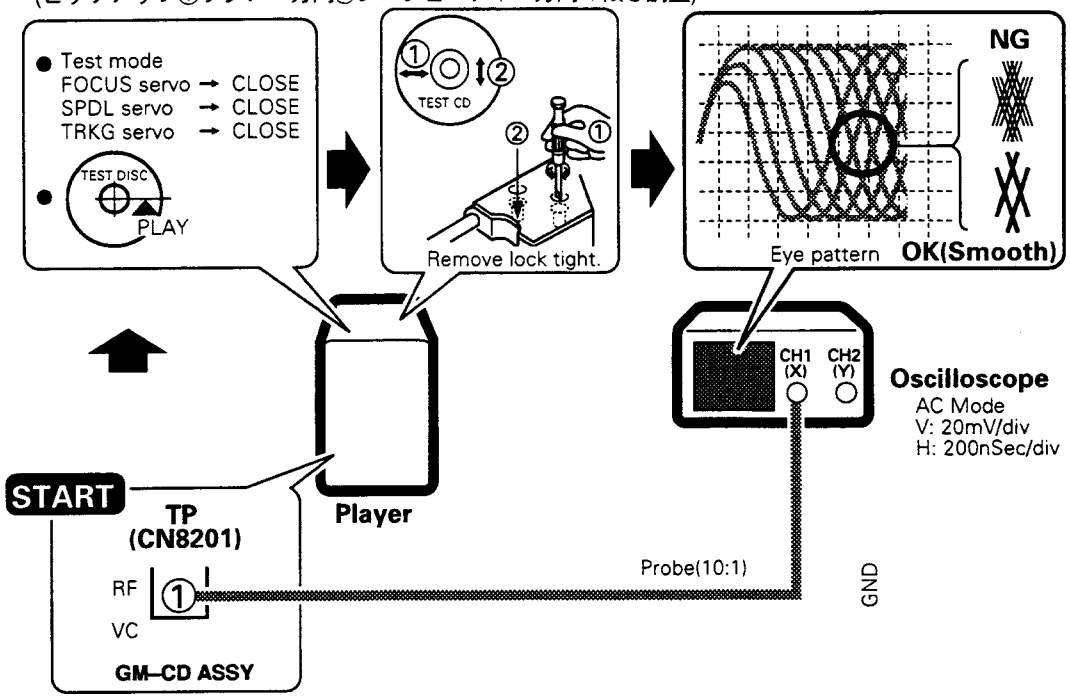


2. Tracking Error Balance Check
(トラッキングエラーバランス確認)



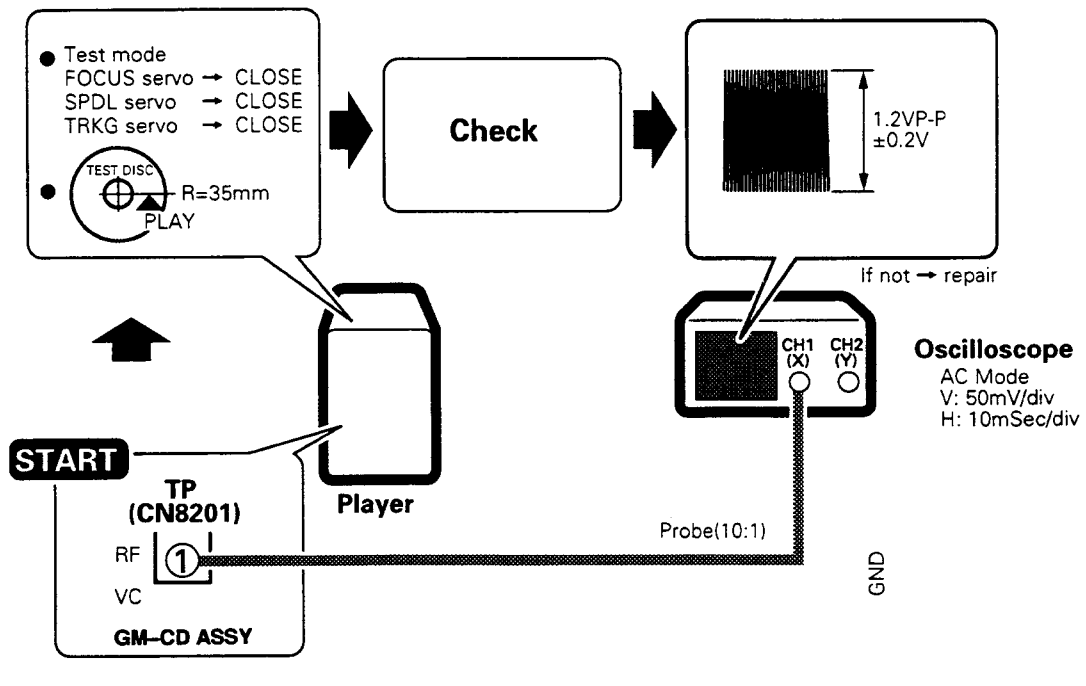
3. PICKUP ①RADIAL / ②TANGENTIAL DIRECTION TILT ADJUSTMENT

(ピックアップ①ラジアル方向②タンジェンシャル方向の傾き調整)

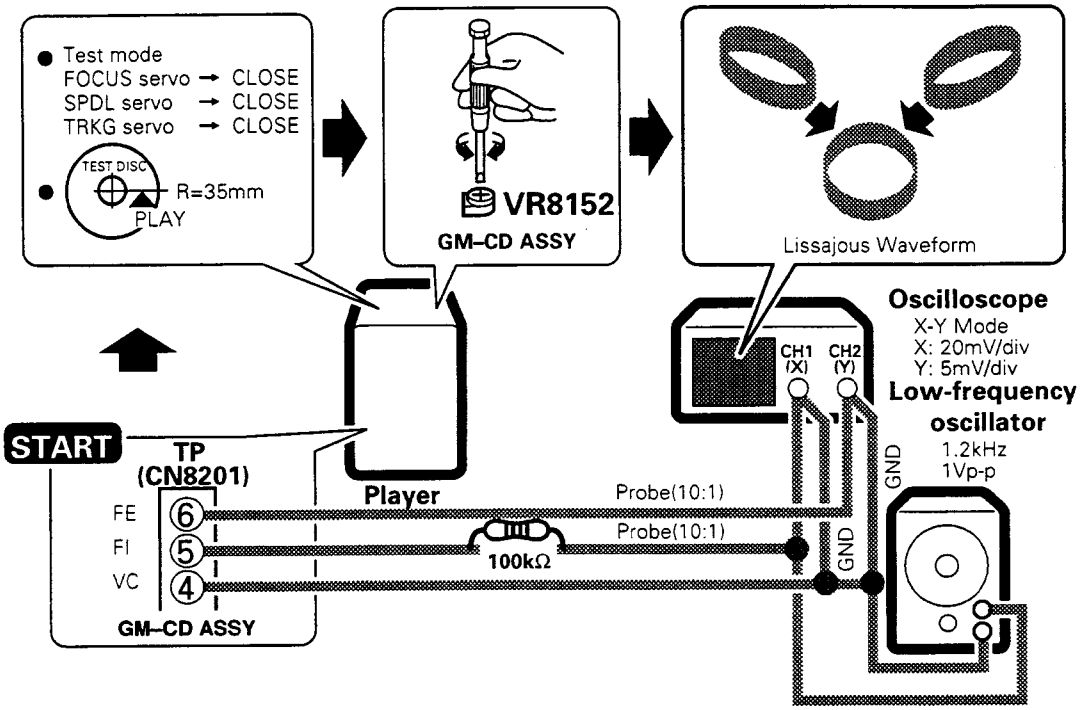


4. RF LEVEL CHECK

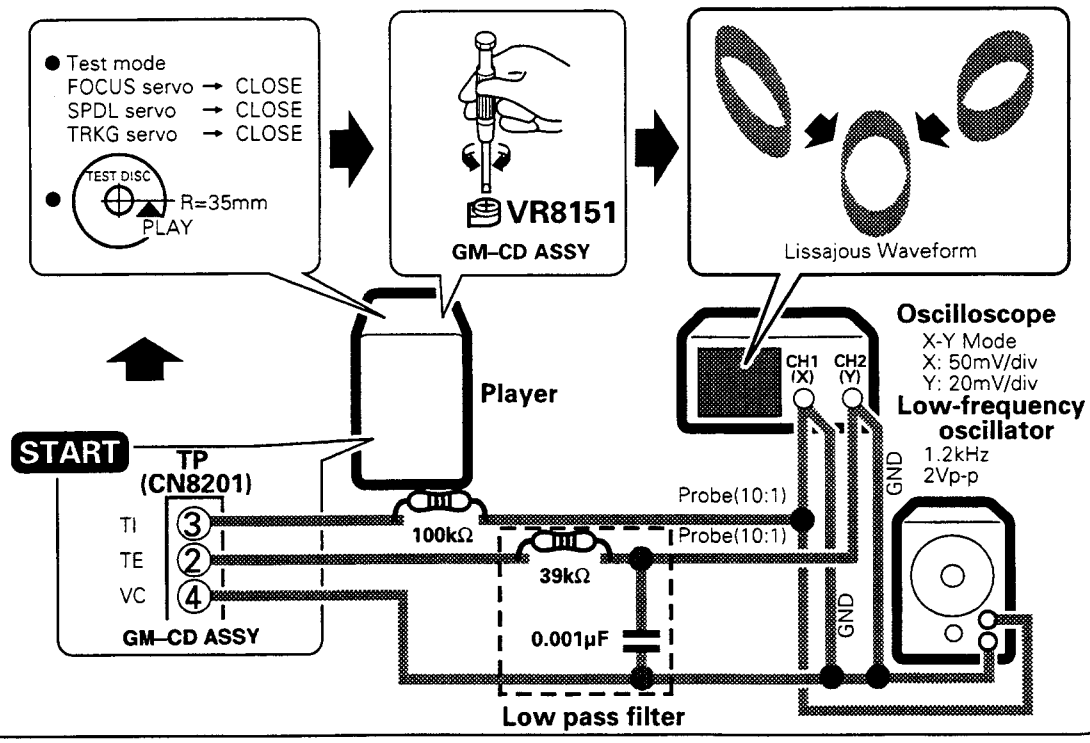
(RFレベル確認)



5. Focus Servo Loop Gain Adjustment
(フォーカスサーボループゲイン調整)



6. Tracking Servo Loop Gain Adjustment
(トラッキングサーボループゲイン調整)



7. IC INFORMATION

- *The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.*

■ PDG164A (IC3001 : AF ASSY)

● System Control Micro Computer

● Pin Function

No.	Pin Name	I/O	Description	ACT
1	PE1EC1/INT1	I	NOT USED	–
2	PE2/INT2	I	DISP CLK EDGE	↓
3	PE3/INT3/NMI	I	NOT USED	–
4	PE4/RMC	I	REMOCON	L
5	PE5/CTL	I	NOT USED	–
6	PE6/PWM	O	CD RESET	L
7	PE7/TO/ADJ	O	SR MUTE	L
8	PB0/CINT	I	TUNED	L
9	PB1/CS0	I	STEREO	L
10	PB2/SCK0	I	DISP CLK	↑
11	PB3/SI0	I	DISP DATA	–
12	PB4/SO0	O	PLL CE	H
13	PB5/SCK1	O	EX CLK	↑
14	PB6/SI1	O	PM0006 CE	H
15	PB7/SO1	O	EX DATA	–
16	PC0/KR0	I	KEY IN 0	H
17	PC1/KR1	I	KEY IN 1	H
18	PC2/KR2	I	KEY IN 2	H
19	PC3/KR3	I	KEY IN 3	H
20	PC4/KR4	I	KEY IN 4	H
21	PC5/KR5	C	POWER	H
22	PC6/KR6	C	VOLUME UP	L
23	PC7/KR7	C	VOLUME DOWN	L
24	PH0	C	LED –	H
25	PH1	C	LED ⏮	H
26	PH2	C	LED ◄	H
27	PH3	C	LED ►	H

No.	Pin Name	I/O	Description	ACT
28	PH4	C	LED ⏭	H
29	PH5	C	LED +	H
30	PH6	C	LED STOP	–
31	PH7	I	Connected to GND	–
32	PA0/AN0	A/D	TEMP * 1	–
33	PA1/AN1	I	FST * 1	–
34	PA2/AN2	A/D	LEV * 1	–
35	PA3/AN3	I	Connected to GND	–
36	PA4/AN4	I	Connected to GND	–
37	PA5/AN5	I	Connected to GND	–
38	RST	–	RESET	–
39	EXTAL	–	Connected to Osillator (8MHZ)	–
40	XTAL	–	Connected to Osillator (8MHZ)	–
41	Vss	–	Connected to GND	–
42	TX	–	OPEN	–
43	TEX	–	OPEN	–
44	PA6/AN6	I	PULSE 1	EG
45	PA7/AN7	I	PULSE 2	EG
46	AVref	–	Connected to 5V	–
47	AVss	–	Connected to GND	–
48	PD0/S0	P	SOL 1	H
49	PD1/S1	P	SOL 2	H
50	PD2/S2	P	MOTOR	H
51	PD3/S3	P	DOLBY NR	L
52	PD4/S4	P	REC MUTE	H
53	PD5/S5	P	PB/$\overline{\text{REC}}$	–
54	PD6/S6	P	PB $1/\overline{2}$	–

** 1 : Refer to page 61.*

No.	Pin Name	I/O	Description	ACT
55	PD7/S7	P	BIAS	H
56	PF0/S8	P	BEAT CUT	H
57	PF1/S9	P	FAN * 1	H
58	PF2/S10	P	IDLE MUTE	L
59	PF3/S11	P	AOMT	H
60	PF4/S12	P	TX MONO	H
61	PF5/S13	P	TX ON	H
62	PF6/S14	P	AF MUTE	H
63	PF7/S15	P	NOT USED	H
64	P10/S16	P	S16	H
65	P11/S17	P	S15	H
66	P12/S18	P	S14	H
67	P13/S19	P	S13	H
68	P14/S20	P	S12	H
69	P15/S21	P	S11	H
70	P16/S22	P	S10	H
71	P17/S23	P	S1	H
72	T15/S24	P	S2	H
73	T14/S25	P	S3	H
74	T13/S26	P	S4	H
75	T12/S27	P	S5	H
76	T11/S28	P	S6	H
77	T10/S29	P	S7	H
78	T9/S30	P	S8	H
79	T8/S31	P	S9	H
80	T7	P	NOT USED	-
81	T6	P	G1	H

No.	Pin Name	I/O	Description	ACT
82	T5	P	G2	H
83	T4	P	G3	H
84	T3	P	G4	H
85	T2	P	G5	H
86	T1	P	G6	H
87	T0	P	G7	H
88	Vfdp	-	CONNECTED TO -30V	-
89	Vdd	-	CONNECTED TO 5V	-
90	NC	-	OPEN	-
91	Vss	-	CONNECTED TO GND	-
92	PG0/RT00	O	SB CLK	↑
93	PG1/RT01	I/O	SB DATA	-
94	PG2/RT02	I/O	SB REQ/ENA	L
95	PG3/RT03	O	4052 B	H
96	PG4	O	4052 A	H
97	PG5	O	4052 INH	H
98	PG6	O	SP RELAY	H
99	PG7	O	CD POWER ON	H
100	PE0/EC0/INT0	I	AC	EG

I/O : INPUT/OUTPUT
I : INPUT
O : OUTPUT
C : CMOS OUTPUT
P : Pch OPEN DRAIN OUTPUT
A/D : A/D CONVERTER INPUT
EG : EDGE

*1 : *Refer to page 61.*

■ IN REGARD TO FAN CONTROL

(1) FAN CONTROL pin functions/names

The following five signals are used for L/H switching of the fan speed and for forces switching the set from Power on status to STD-by status.

	Function	Operation
PWON *1	The power status of the set is displayed.	L is displayed for STD-by and H for Power on.
FAN *2	The fan rotation status is shown.	L is displayed for L speed and H for H speed. The initial display at the time of Power on is L.
TEMP	The power pack temperature is detected.	The fan L/H speed is switched and the set is dropped to standby status according to the detected temperature.
LEV	Power amplifier level detection.	The fan L/H speed is switched according to the detected level.
FST	Fan lock status detection.	L is displayed when the fan is stopped and H when it is rotating.

(2) Operation specifications

*1 Power on → STD-by switching

The set is switched to STD-by condition when one of the following conditions occurs.

- When FST is L continuously for at least 2 sec after 4 seconds have elapsed after PWON output.
- When the TEMP voltage is 1.3 V or less after 4 seconds have elapsed after PWON output.

*2-1 Fan L → H speed switching

The fan is switched from L to H speed when one of the following conditions occurs.

- When the TEMP voltage is 2.6 V or less.
- When the LEV voltage is 1.7 V or more.

*2-2 Fan H → L speed switching

The fan is switched from H to L speed when the following condition occurs.

- When the TEMP voltage is 3.3 V or more and the LEV voltage is 1.2 V or less.

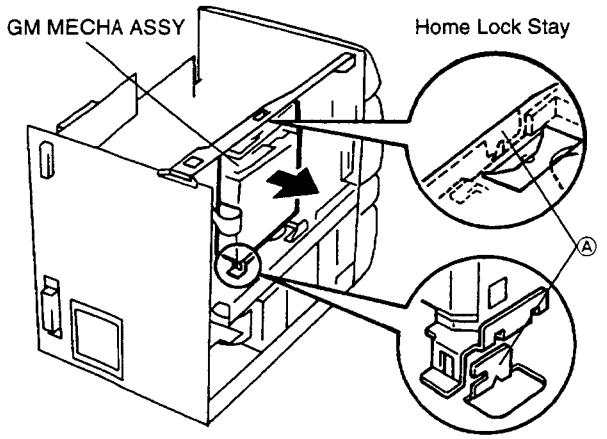
8. DISASSEMBLY

■ REMOVING THE GM MECHA ASSY

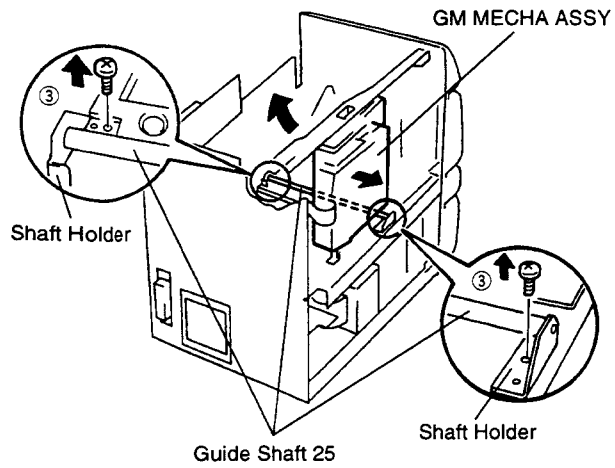
NOTE : Before removing the GM Mecha Assy, make sure you turn the power OFF and disconnect the AC power cord.

① Remove the bonnet. (Since the front of the home lock stay makes contact, hold the bonnet in that place and pull and lift at the same time.)

② Move the GM Mecha ASSY to the right (viewed from the rear), watching out for the 2 Lock locations (part Ⓐ).



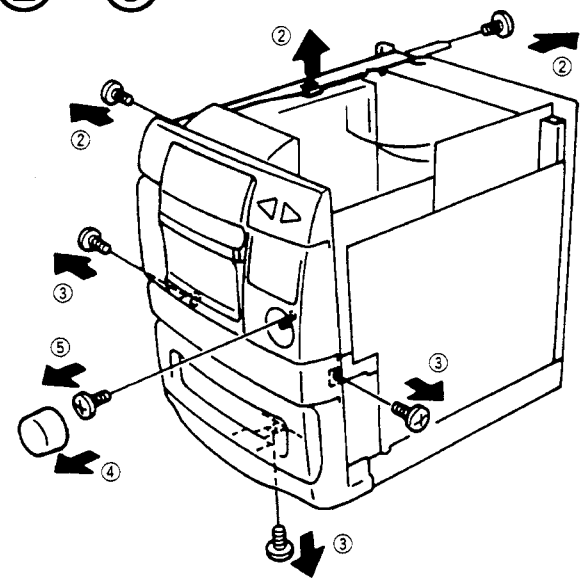
③ Remove the shaft holder that fixes guide shaft-25 in place (screw ③), and remove the GM Mecha ASSY together with guide shaft.



■ REMOVING THE FRONT PANEL

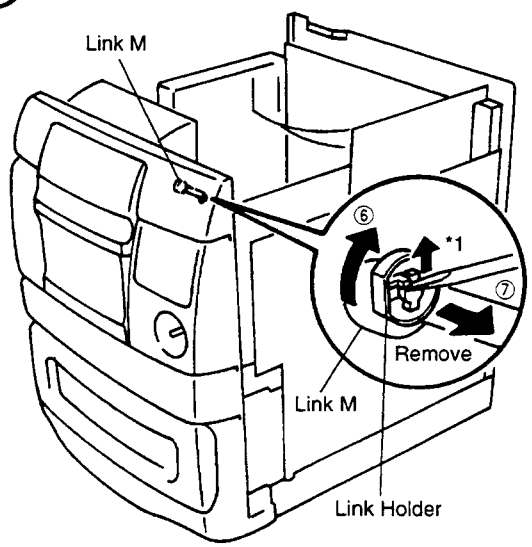
① Remove the bonnet.

②–⑤



⑥ Remove the link holder (*1) that fixes hood M and the link M in place.

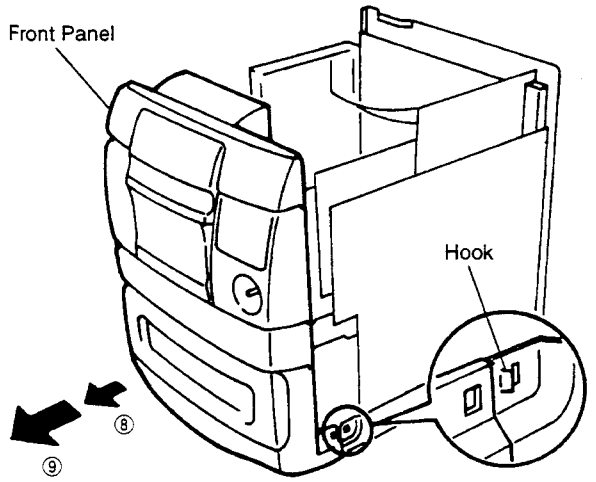
⑦ Remove the link M.



*Note *1: When removing the link holder, be careful not to press hard on the link holder hook, for this may cause the hook to break.*

⑧ Shift the front panel slightly toward you, being cautious of the left and right hook on the chassis and sub chassis.

⑨ Pull the front panel further toward you, and remove it from the chassis.

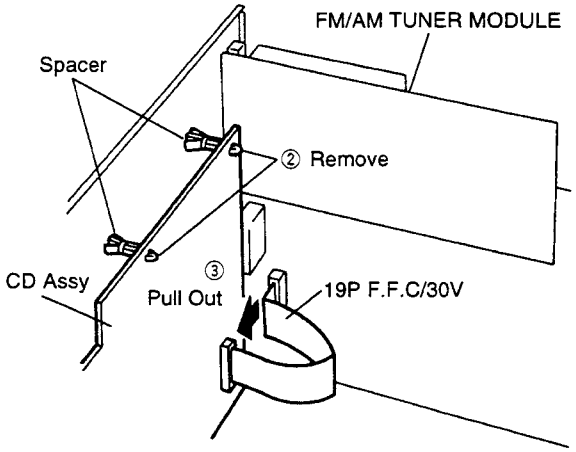


■ REMOVING THE AMP ASSY

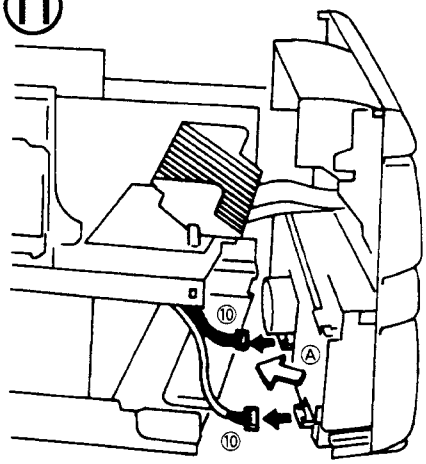
① Remove the bonnet and home lock stay. (Refer to "■ Removing the Front Panel")

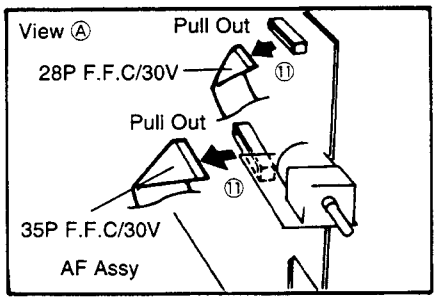
②, ③

Remove the spacer from the CD ASSY.

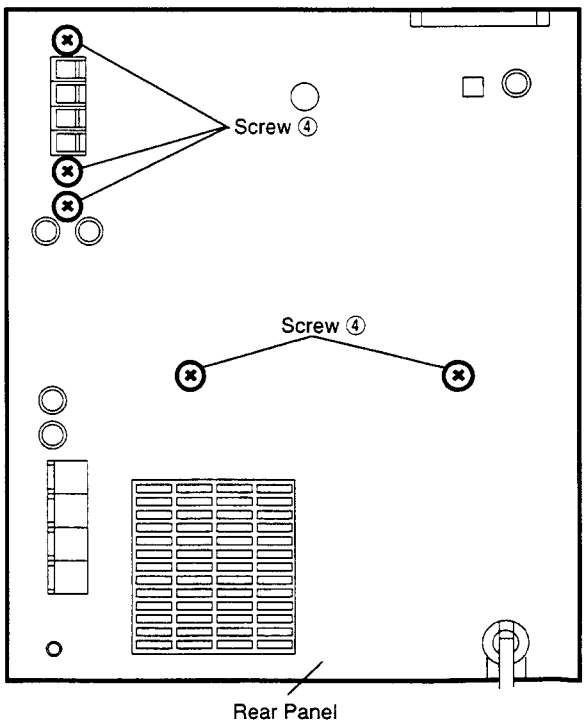


⑩, ⑪



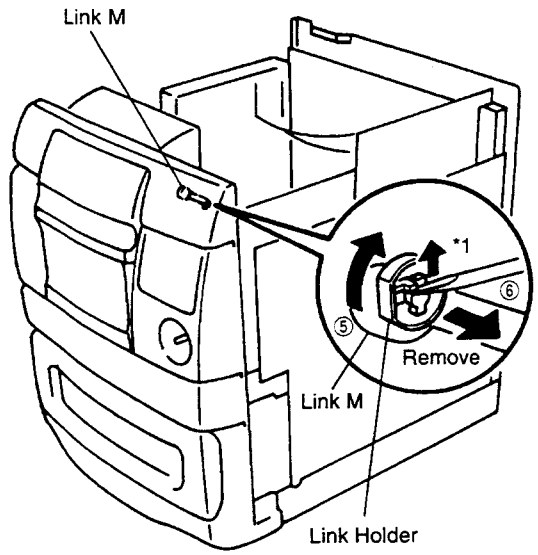


④ Remove the rear panel (screw ④ x 5).



⑤ Remove the link holder (*1) that fixes hood M and the link M in place.

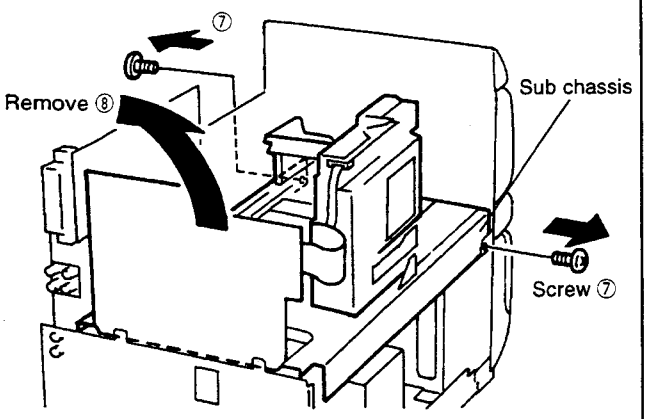
⑥ Remove the link M.



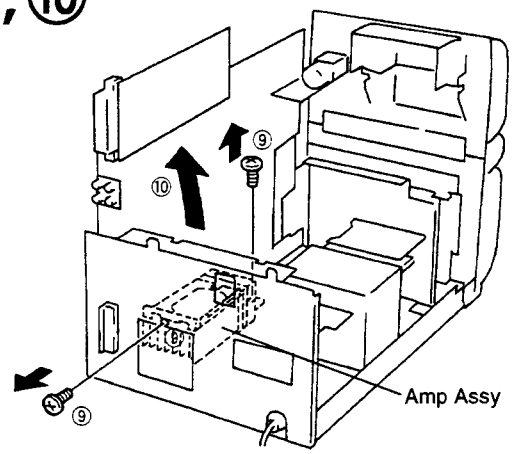
*Note *1: When removing the link holder, be careful not to press hard on the link holder hook, for this may cause the hook to break.*

⑦, ⑧

Remove screw ⑦ and remove the sub chassis together with the GM Mecha ASSY.



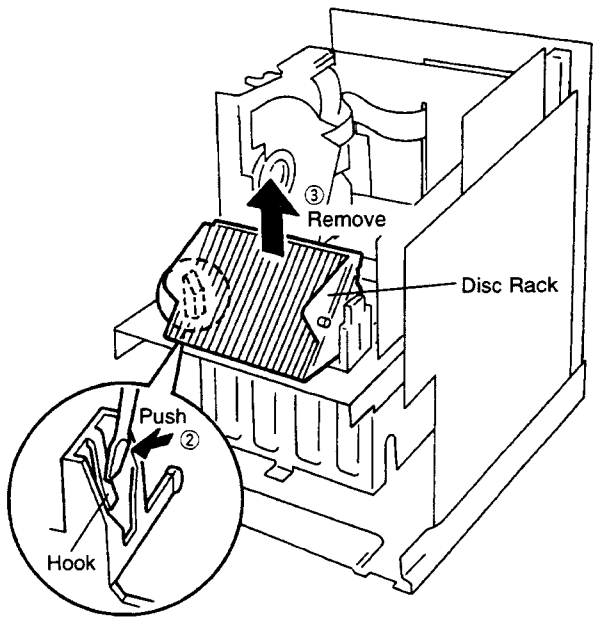
⑨, ⑩



■ REMOVING THE DISC RACK

① Remove the front panel.

②, ③

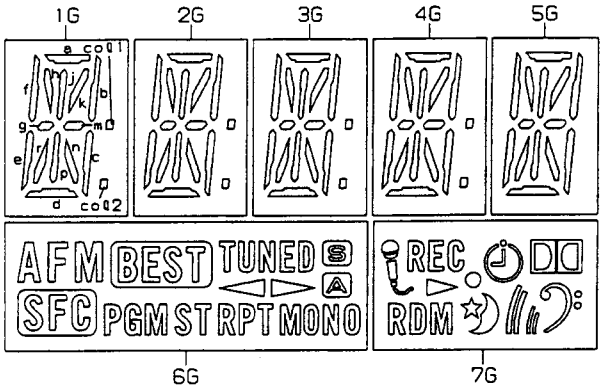


9. FL INFORMATION

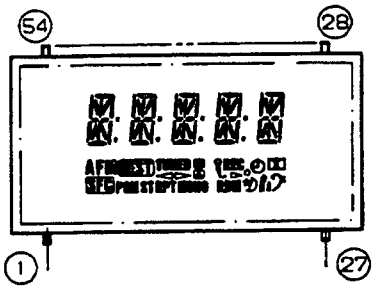
■ AAV7023 (V401: DISPLAY ASSY)

● FL Tube

● Grid assignment



● Pin Assignment



● Anode Connection

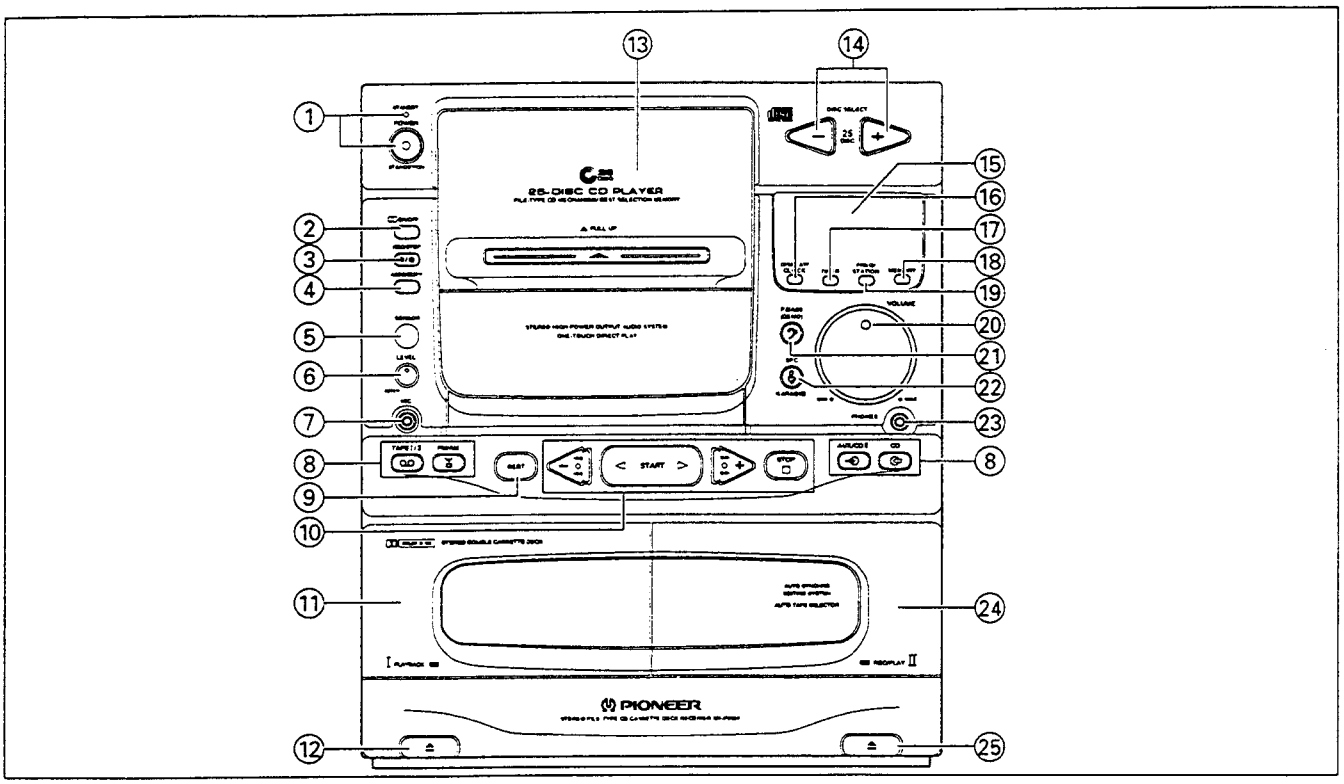
	1G~4G	5G	6G	7G
P1	col2	-	A	
P2	d	d	F	REC
P3	n	n	M	
P4	p	p	BEST	
P5	r	r	TUNED	
P6	e	e	S	○
P7	c	c	A	RDM
P8	g	g	◁	
P9	m	m	▷	
P10	f	f	SFC	
P11	b	b	PGM	-
P12	k	k	ST	-
P13	j	j	RPT	-
P14	h	h	MONO	-
P15	a	a	-	-
P16	col1	-	-	-

● Pin Connection

PIN NO.	54	53	52	51	50	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28
CONNECTION	F11	F11	NP	7G	6G	5G	4G	3G	2G	1G	NX	NX	NX	NX	NX	NX	NX	NX	NX	11	11	11	11	11	11	NP	F22	F22

PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
CONNECTION	F11	F11	NP	IC	P1	P2	P3	P4	P5	NX	NX	NX	NX	NX	NX	NX	NX	NX	NX	P6	P7	P8	P9	P0	P11	NP	F22	F22

10. PANEL FACILITIES



① POWER STANDBY/ON switch and STANDBY indicator
This is the switch for electric power.
ON : When set to the ON position, power is supplied and the unit becomes operational.
STANDBY : When set to the STANDBY position, the main power flow is cut and the unit is no longer fully operational. A minute flow of power feeds the unit to maintain operation readiness. (The STANDBY indicator lights.)

② Dolby* NR ON/OFF button
Each time this button is pressed, the Dolby NR system turns on and off.

③ REC/STOP button (●/■)

④ ASES/COPY button

⑤ Remote sensor (SENSOR)

⑥ Microphone level (LEVEL)

⑦ Microphone jack (MIC)

⑧ Function buttons

⑨ BEST button

⑩ Common operation button section (Refer to page 18)

⑪ TAPE I cassette door

⑫ TAPE I Eject button (▲)

⑬ Hood

⑭ DISC SELECT button (–, +)

⑮ Display

⑯ DISPLAY/CLOCK button

⑰ TIMER button

⑱ MEMORY button

⑲ FREQ/STATION button

⑳ VOLUME control

㉑ P.BASS (DEMO) button

㉒ SFC/KARAOKE button
Each time this button is pressed, the mode changes in the following sequence:

HALL → LIVE → DISCO
off ← KARAOKE ← MOVIE

NOTE:
If KARAOKE is selected, the vocal part in songs is muted and only the instrumental accompaniment (backup) is played.

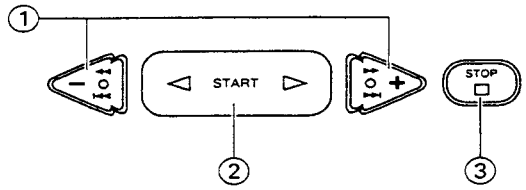
㉓ Headphones jack (PHONES)

㉔ TAPE II cassette door

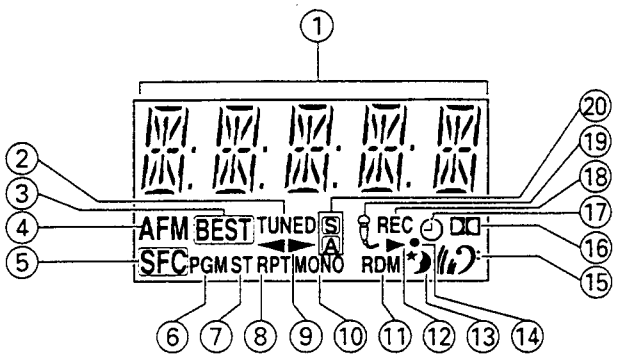
㉕ TAPE II Eject button (▲)

*
- *Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.*
- *"DOLBY" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.*

Common operation button section/Sección de botón de operación común



Display/
Presentación/



① ◁, ▷ buttons

② START button (◄ ►)

③ STOP button (■)

- Roles of the common operation buttons (The roles of the buttons vary depending on the input functions as shown below.)

During CD input
START : Play/pause button
STOP : Stop button
▷ : Fast forward/track search button
◁ : Fast reverse/track search button

During cassette deck input
START : Play button/Tape transport direction
STOP : Stop button
▷ : Fast forward button
◁ : Rewind button

During tuner operation
▷ : Frequency Up button
◁ : Frequency Down button

① Indicates frequency and major operation status.
② Lights during radio broadcast reception.
③ Flashes during Best Selection setting, and lights during Best (Selection memory) play.
④ Indicates the band AM or FM.
⑤ Lights during SFC mode operation.
⑥ Lights when you press the PGM button.
⑦ Lights when an FM stereo broadcast is received.
⑧ RPT : Lights during repeat play.
⑨ Lights to show TAPE II tape direction.
⑩ Lights when you press the MONO button.
⑪ Lights when you press the RANDOM button.
⑫ Lights during CD play.
(Flashes in pause mode.)
⑬ Lights during sleep timer operation.
⑭ Lights when setting the Beat Cut function.
⑮ Lights when you press the P.BASS button.
⑯ Lights when Dolby NR is ON.
⑰ Lights when setting the timer.
⑱ Lights during recording and recording timer operation.
⑲ Lights during KARAOKE mode operation.
⑳ S : Lights during SINGLE mode operation.
A : Lights during ALL mode operation.

XR-P260F

11. SPECIFICATIONS

■ STEREO FILE-TYPE CD CASSETTE DECK RECEIVER: XR-P260F

Amplifier Section

<U.S. and Canadian models>

Continuous average power output is 50 watts* per channel, min., at 8 ohms from 60 Hz to 15,000 Hz with no more than 1.0 % total harmonic distortion.**

<Australian model>

Continuous Power Output (RMS) ..... 70 W + 70 W
(1 kHz, T.H.D. 10 %, 8 Ω)

Peak Music Power Output ..... 1000 W

FM Tuner Section

Reception frequencies ..... 87.5 MHz to 108 MHz

Antenna input ..... 75 Ω unbalanced

AM Tuner Section

Reception frequencies ..... 531 kHz to 1,602 kHz (9 kHz step)
530 kHz to 1,700 kHz (10 kHz step)

Antenna ..... Loop antenna (included)

Double Cassette Deck Section

System type ..... 4-track, 2-channel stereo

Heads ..... Recording/playback head x 1
Playback head x 1
Erasing head x 1

Motor ..... DC servo motor x 1

Frequency response

Type I (Normal) tape ..... *35 Hz to 14,000 Hz ±6 dB
(recorded at -20 dB)

SN ratio ..... *56 dB
(peak recording level, audible compensation)

Dolby B type NR on ..... 10 dB compensation at 5 kHz

* Values measured in accordance with EIAJ standards.

■ FILE TYPE CD PLAYER

Type ..... Compact disc audio system

Usable discs ..... Compact audio discs

Channels ..... 2 channels (stereo)

Program steps ..... 32 steps maximum

■ ELECTRICAL REQUIREMENTS, ETC.

Power Requirements

U.S., Canadian models ..... AC 120 V, 60 Hz

Power Consumption

U.S. model ..... 160 W

External dimensions ..... 260 (W) x 310 (H) x 369 (D) mm
10-1/4 (W) x 12-3/16 (H) x 14-1/2 (D) in.

Weight ..... 11 kg (24 lb 5 oz)

■ ACCESSORIES

Operating Instructions 1

FM antenna 1

AM loop antenna 1

Remote control unit 1

AA/R6 dry cell batteries 2

CD case stand 1

NOTE:

Specifications and design are subject to possible modifications without notice, due to improvements.

* Measured pursuant to the Federal Trade Commissions's. Trade Regulation rule on Power Output Claims for Amplifier.

** Measured by audio spectrum analyzer.